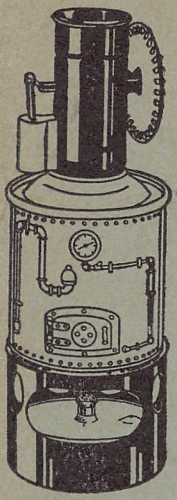
OLD SECRETS

AND

NEW DISCOVERIES

PRINTED IN U.S.A.

Steam Engines—25c, 35c, 85c



THE WHIZZER STEAM ENGINE

A Scientific Toy With Lots of Fun

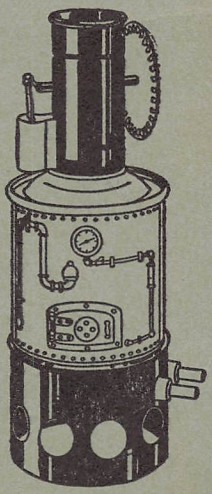
Alcohol Model

Runs Several Hours on One Filling of Water

THIS is surely the world's biggest value in mechanical toys. A great big steam engine, measuring 7 inches in height by 2½ inches in diameter and 7½ inches in circumference, and it sells for ONLY TWENTY-FIVE CENTS (ten cents extra for postage and packing.) You should see it run, too. It's a revelation to see the fly wheel spin around at a great rate as soon as you "get steam up." It is simplicity itself to operate—any boy can work it. Runs on alcohol or canned heat. Simply fill the boiler wth water, light up, and in a few minutes sufficient steam is generated to run the engine at top speed.

Fully Tested. Guaranteed to Run.

The engine is foolproof, harmless, fully tested, and guaranteed to run. A scientific toy that illustrates the principle of the steam turbine. Runs for hours on one filling of water. Every boy should have one. Wonderfully well made.



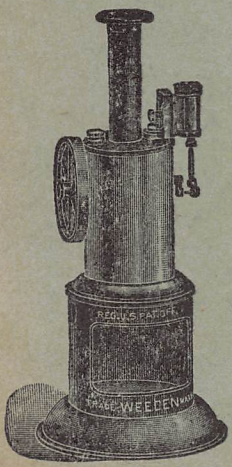
No. 4236. Whizzer Steam Engine. Price.**25c**

Not postpaid. Add 10 cents for postage & packing

WHIZZER STEAM ENGINE

Electric Model

This is the famous Electric Model of the Whizzer Steam Engine that runs by electricity. No alcohol or canned heat to bother with. You just hook it up with your house current or plug in to any convenient light socket and the electric heater boils the water that furnishes the steam in but a few minutes. Otherwise the specifications are the same as the alcohol model described above. It is strong and sturdy, well made and finished throughout—an education and a delight to any boy.



No. 4237 Whizzer Steam Engine Electric Model **35c**

Not postpaid. Add 10 cents for postage & packing

WEEDEN STEAM ENGINE

A big and most powerful Engine

This is a big and powerful Steam Engine, manufactured by Weeden. A real beauty. It is big, strong, husky, and smooth running. Measures nearly 10 inches in height, not quite 4 inches at the base. Has heavy fly wheel, smooth running piston, and heavy cylinder. Strong boiler and fittings. Large fire box. Pulley wheel, 2 inches in diameter for running mechanical toys. Runs on alcohol or canned heat. Big, powerful, highest quality steam engine that you will be proud to own.

No. 4238. Weeden Steam Engine. Price.....**85c**

Not postpaid. Add 15 cents for postage & packing

JOHNSON SMITH & CO., Racine, Wisconsin

Old Secrets and New Discoveries

Secrets For Farmers

HOW TO MAKE HENS LAY EGGS

A hen is said to have the capacity of laying 600 eggs and no more—a few in her first year, from 320 to 375 in the next three, and the rest from the fifth to the ninth inclusive. The true economy, therefore, is not to keep hens after their fourth year. By feeding stimulating food, the hen can be made to lay the quantum of eggs with which she is endowed in a much shorter time than if left to scratch for herself. There is no better food for this purpose, fed each alternate day than the following: To 3 gals. of boiling water add ¼ oz. of common salt, a teaspoonful of Cayenne pepper, and 4 oz. lard. Stir the mixture until the pepper has imparted considerable of its strength to the water. Meantime the salt will have been dissolved and the lard melted. Then, while yet boiling hot, stir in a meal made of oats and corn, ground together in equal proportions, until a stiff mush is formed. Set away to cool down to a milk warmth. Before feeding taste to see that you have an overdose neither of salt nor pepper, and to prevent the hens from being imposed upon with a mixture not fit to be eaten. Besides this, especially during the winter, give them on the days on which above mixture is omitted, a ½ oz. of fresh meat chopped fine, and at all times plenty of pure water, grain, gravel, and lime.

JOCKEY TRICKS

How to make a horse appear as though badly foundered.—Take a fine wire and fasten it tight around the fetlock, between the foot and the heel, and smooth the hair over it. In twenty minutes the horse will show lameness.—Do not leave it on over nine hours.—**To make a horse lame.**—Take a single hair from his tail, put it through the eye of a needle, then lift the front leg, and press the skin between the outer and the middle tendon or cord, and shove the needle through, cut off the hair each side and let the foot; the horse will go lame in twenty minutes.—**How to make a horse stand by his food and not take it.**—Grease the front teeth and the roof of the mouth with common beef tallow, and he will not eat until you wash it out; this in conjunction with the above will consummate a complete founder.—**How to cure a horse from the crib or sucking wind.**—Saw between the upper teeth to the gums.—**How to put a young countenance on a horse.**—Make a small incision in the sunken place over the eye, insert the point of a goose quill and blow it up; close the external wound with thread and it is done.—**To cover up the heaves.**—Drench the horse with one-fourth pound of common bird shot, and he will not heave until they pass through him.—**To make a horse appear as if he had the glanders.**—Melt four ounces of fresh butter and pour it into his ear.—**To distinguish between distemper and glanders.**—The discharge from the nose in glanders will sink in water; in distemper it floats.—**How to make a true pulling horse balk.**—Take tincture of cantharides one ounce, and corrosive sublimate one drachm, mix, and bathe his shoulder at night.—**How to nerve a horse that is lame.**—Make a small incision about half way from the knee to the joint on the outside of the leg, and at the back part of the shin bone you will find a small white tendon or cord, cut it off and close the external wound with a stitch, and he will walk off on the hardest pavement and not limp a particle.

HOW TO GET RID OF INSECTS

By scattering chloride of lime on a plank in a stable, biting fleas are driven away. Sprinkling beds of vegetables with a weak solution of this salt effectually preserves them from caterpillars, slugs, etc. It has the same effect when sprinkled on fruit trees or shrubbery. Mixed in a paste with fatty matter, and applied in a narrow band around the trees, it prevents insects from creeping up. Another plan is to carry all the toads you may find to your gardens. They will devour immense numbers of bugs. A toad will swallow the largest specimen of the tomato worm, though sometime he will have a hard time of it. Hens and wasps and spiders are all devourers of your enemies. A common duck will go up and down rows of tomato and potato vines, and pick off the large worms usually found on such vines, as fast as it can see them; and they will see a half dozen when a man would not see one. Young turkeys will do the same service, though they are not so easily controlled and guided. All fallen fruits are to be picked up twice a day—at any rate, one time—boiled, and then given to your cattle to be devoured. By doing this it will pay ten times over, and the result of it will be that the next year you will not have insects. See also the recipes for a like purpose in this department.

HOW TO CURE BLIGHT IN A TREE

A smothering straw fire should be made early in October, in calm weather, under each tree, and kept up during an hour or more. This done, scrape the moss and other impurities from the trunk, and from every obscure hole and corner; set your ladders to the branches, carefully cleaning them in the same way, taking from the remaining leaves every web or nidus of insects. If need be, wash the trunk, and all the larger wood, with a solution of lime and dung. Last of all, it is necessary to destroy the insects and eggs which may have dropped upon the ground, and it may be useful to loosen the soil in the circumference. In the spring, or early blighting season, apply your ladders, make a careful survey of every branch, and act accordingly; repeat this monthly picking off all blights by hand and using the water engine, where ablution may be necessary. To those who have fruit, or the market profit thereof, every orchard or garden, little or great, will amply repay such trouble and expense.

SUN PRINTING ON FRUIT

Monograms, initial letters, or other designs, can be printed on such fruit as apples, pears or peaches by the action of the sun, with very pretty effect, of either a light or dark color. To do this draw the monogram, letter or design on a piece of writing paper, and paste it with mucilage or glue upon the side of the fruit exposed to the sun, just before the fruit begins to color, and when the fruit is ripe, and the paper is removed, the design will appear in a lighter or different color to the rest of the fruit; as, for instance, if the experiment is tried on a yellow-fleshed peach with a red cheek, the design will appear in gold, surrounded with red. If the opposite effect is intended, take a small oval or circular piece of paper, and cut out or pierce the letters or design in it, and paste on the fruit, which, when ripe, will have the design in high color on a yellow or on a light green ground of the shape of the piece of paper, and this again will be surrounded by the brighter color of the fruit.

HOW TO DESTROY CATERPILLARS

Boil together a quantity of rue, wormwood and any cheap tobacco (equal parts), in common water. The liquid should be very strong. Sprinkle it on the leaves and young branches every morning and evening during the time the fruit is ripening.

HOW TO KEEP CELLARS FROM FREEZING

The following experiment was tried by a gentleman with the cellar of an out-house, in which on several occasions vegetables have frozen, though the cellar was fortified against frost by a process known to farmers as "banking." The walls and ceiling were pasted over with four or five thicknesses of newspaper, a curtain made of the same material being also pasted over the window at the top of the cellar. The papers were pasted to the bare joist overhead, leaving an air space between them and the floor. The result was that no frost entered the cellar, though the cellar was left unbanked. We do not counsel the special use of old newspapers for this purpose. It is just as well, or better, to use coarse brown paper. Whatever paper is employed, it will be necessary to sweep down the walls thoroughly, and to use a very strong size to hold the paper to the stones. It is not necessary to press the paper down into all the depressions of the wall; every air space beneath it is an additional defence against the cold.

HOME MADE BAROMETERS

1. Take a thin glass tube, 12 inches long and ¾-inch in diameter, and fill three-fourths of it with two drachms of camphor, a half drachm of pure saltpeter, a half drachm of muriate of ammonia and two ounces of proof spirits. The tube may be tied over with bladder if required. As a sign of fine weather, the sediment of white flakes will settle near to the bottom of the tube, while the liquid will be quite transparent above. As a sign of rain, the matter will rise to the surface of the solution. At the approach of a storm, the matter will float on the surface of the solution in the form of white flakes, and the fluid will appear in a state of fermentation. During frost, the solution will present a starry appearance, and during summer or hot weather the matter will fall to the bottom as a solid substance. 2. Take a common phial, and cut off the rim and part of the neck, by means of a piece of cord passed around it, and moved rapidly to and fro, in a sawing direction; the one end being held in the left hand and the other fastened to any convenient object, while the right hand holds and moves the phial; when heated dip it suddenly into cold water, and the part will crack off; or separate it with a file. Then nearly fill the phial with clean water, place your finger on the mouth and invert it; withdraw your finger and suspend it in this position with a piece of twine. In dry weather the under surface of the water will be level with the neck of the bottle, or even concave; in damp weather, on the contrary, a drop will appear at the mouth and continue until it falls, and is then followed by another in the same way. 3. Take a common glass pickle bottle, wide mouthed, fill it within three inches of the top with water; then take a Florence oil flask, removing the straw covering and cleansing the flask thoroughly; plunge the neck of the flask into the other bottle as far as it will go, and the barometer is complete. In fine weather the water will rise into the neck of the flask, even higher than the mouth of the bottle. Before a heavy gale of wind the water has been seen to leave the flask altogether, at least eight hours before the gale came to its height.

HOW TO CLEAN RUSTY PLOWS

Take a quart of water and pour slowly into it half a pint of sulphuric acid. (The mixture will become quite warm from chemical action, and this is the reason why the acid should be poured slowly into the water, rather than the water into the acid.) Wash the mould-board (or any other iron that is rusty) with this weak acid, and let it remain on the iron until it evaporates. Then wash it once more. The object is to give time for the acid to dissolve the rust. Then wash with water, and you will see where the worst rusty spots are. Apply some more acid, and rub those spots with a brick. The acid and the scouring will remove most of the rust. Then wash the mould-board thoroughly with water, to remove all the acid, and rub it dry. Brush it over with petroleum or other oil, and let it be until spring. When you go to plowing, take a bottle of the acid water to the field, and apply it frequently to any spots of rust that may remain. The acid and the scouring of the earth will soon make it very bright and smooth.

HOW TO DESTROY WEEDS

Annual weeds, or such as spring from seed and die the same year, are most easily destroyed. For this purpose it will be sufficient to let them spring up till near the time of ripening their seed, and then plow them down before it comes to maturity. It is also of service to destroy such weeds as grow in borders or neglected corners, and frequently scatter their seeds to a great distance—such as the thistle, dandelion, rag weed, etc., for these propagate their species through a deal of ground, as their seeds are carried about with the wind to very considerable distances. A farmer ought also to take care that the small seeds of weeds, separated from the corn in winnowing, be not sown again upon the ground for this certainly happens when they are thrown upon a dunghill, because, being the natural offspring of the earth, they are not easily destroyed. The best method of preventing any mischief from this cause is to burn them. Perennial weeds are such as are propagated by the roots; and last for a number of years. They cannot be effectually destroyed but by removing the roots from the ground, which is often a matter of some difficulty. The only method that can be depended upon in

this case is frequent plowing, to render the ground as tender as possible, and harrowing with a particular kind of harrow, in order to collect these pernicious roots. When collected, they ought to be dried and burned as the only effectual way of insuring their doing no further mischief.

GRAFTING

In grafting, a sharp penknife and a good fine saw are indispensable. Splitting the stalk so that the bark shall not be at all bruised, and shaping the scion wedge-fashion both ways, preserving also the bark uninjured, and placing the rim of the wood of both stock and scion exactly together, so that the sap can intermingle—there is no danger of failure if they are properly waxed One year's wood should always be used, when it can be obtained, as it is more certain to take and grows more vigorously. For grafting generally, any time is good when growth is going on, and there is not too much sap in the scion; the amount in the stock makes no difference. If there is much in the scion, it is liable to rot before the union takes place. If scions are taken from healthy trees, and are kept from drying, sprouting, or other injuries, grafting may go on from early in the spring till midsummer.

GRAFTING WAX

1. Take 1 lb. of tallow, 3 lbs. of bees-wax, and 4 lbs. of resin; put into a kettle and melt slowly until all the ingredients are combined. If to be used in the open air in cool weather, add a ¼ to ½ lb. more tallow. Melt the resin first, and be sure it is well melted before adding the wax and tallow. If this be not done, the grafting wax will be full of lumps. When melted pour it into cold water, and work it by hand into rolls of convenient size. In cold weather, soften the wax by putting it into warm water before using. When scions are set—say as many as 20 or 30, or few as is wished—have the mixture ready and apply it warm, with a small wooden paddle. See that every part is covered and the air completely excluded. It requires no bandage.

TAMING AND TRAINING HORSES

Many persons pay for instructions in training horses, and yet they nearly all fail, simply because, with all the instructions in the world, they cannot handle a horse—it is not in them. To be a successful trainer you must have a sympathy with the horse and a personal power of control. That which partakes of the power necessary to subdue and train, you will find in your own mind, your own love, will and wisdom. If you have little or no instinctive love for the horse, of course you are not the person to control him. Men and women are often found who are said to have the natural gift of controlling the horse; they love horses from instinct, as it were. The secret in these cases consists in their intense love for the horse. If you love the horse, you must know how to make the horse love you. Love, in all grades of animals, has its appropriate language; and when this language is addressed to the horse, it excites love, of course. A blow with a whip or club does not come from love, but from combativeness, and it excites combativeness or fear in the horse. If you want to make a horse love you, (and you must cause him to love you if you control him,) why of course you must love him and treat him accordingly. Study the character of your horse—not the nature of horses in general, but of the horse that you wish to control. Horses differ in their dispositions as really as men do, and each one is to be approached, attracted, pleased and controlled accordingly.

To Make Him Lie Down.—First, catch your horse, then strap the near fore leg up round the arm of the animal; lead him about on 3 legs until he becomes tired or weary; he will then allow you to handle him anywhere; then attach a strap with a ring to the off fore-fetlock; to this ring fasten another strap, which being brought over the horses's back to the near side, is put through the ring on the off fore-fetlock; return the end of the strap to the near side, still keeping fast hold, and move the animal on, and pull; he will, then be thrown upon his knees, when, after struggling for some time, by gentle usage he will lie down. After unloosing the straps, put him through the same process as before, when the horse will lie down whenever required. Uniformity is necessary in our method. It is by the repetition, by the constant recurrence of certain motions, words or actions, that we succeed. Many fail for the want of uniformity in their method. They are loving and kind by spells; then they are harsh and cruel. The horse is "impressed," as it is said, with his master's wishes, when those wishes are often and uniformly expressin motions, words and actions! If man needs "precept upon precept, line upon line," etc., in order to learn his lessons well, how much more true is this of the horse, which is below man in consciousness and the reflective faculties.

Teaching Him to Pace

Buckle a 4-pound weight around the ankles of his hind legs (lead is preferable), ride your horse briskly with these weights upon his ankles at the same time, twitching each rein of the bridle alternately; by this means you will immeadiately throw him into a pace. After you have trained him in this way to some extent, change your leaded weight for something lighter; leather padding, or something equal to it, will answer the purpose; let him wear these light weights until he is perfectly trained. This process will make a smooth and easy pacer of any horse.

To Make Him Trot

The secret consists in using rollers on the front feet. These rollers are made of pieces of wood or horn turned round, as big as a hickory nut, with a gimblet hole bored through the center of each, and about 12 of them strung on a string or narrow strap, (which should be much smaller than the hole,) and then tied or buckled very loose around the joint next to the hoof, so that they will play loose up and down when the horse is in motion. As soon as the horse finds something on his feet, he will lift them up higher and throw them out further and handsomer; this he will soon learn permanently. Another secret is that a small or medium sized flat is the best and far superior to the track system for teaching the horse or colt to gather quickly. A very light skeleton or gig should be used in training.

To Sit On His Haunches

First teach the horse to obey you, so that when you say "Ho!" he will remain still. Then, having taught him to lie down, let him get up on his fore legs and then stop him. The horse gets up in this way, and you have only to teach him to hold his position for a while. It does not strain the horse to sit, and you must always use the word "sit" in connection with the feat, also the word "down" when you wish him to fall.

To Make Him Follow You

Take your horse to the stable, put on a surcingle and a bridle with short reins, which may be checked up a little and fastened to the surcingle. Then lead him about a few times, and letting go the bridle continue to caress him, as you constantly say, "Come along." If he lag, give him a light cut behind with a long whip. Continue this until you succeed. Do not forget the element of "love" in this as well as other feats.

To Teach Him To Pick Up A Handkerchief

Spread on the sawdust a white cloth containing a liberal supply of oats; lead the animal round the ring, and let him take some of the oats. This is lesson No. 1—its object being to fix in the horse's mind a connection between the cloth and the oats. The march round the circle being once or twice repeated, he stops at the handkerchief as a matter of course. By dint of practice—say a couple of weeks—he will learn to stop as readily in a trot or a gallop as in a walk. After a time the handkerchief must be doubled over and tied in a knot; the animal shakes it to get the grain, but not succeeding, lifts it from the ground, which is just the thing wanted. When the horse has done this a few times, and finds that, though he can shake nothing out, he will receive a handful of oats as a reward, he may be trusted to perform in public. The last step of all—persuading the horse to carry the handkerchief to his owner—is easily done. Of his own accord he will hold the cloth till it is taken from his mouth, and there will be little difficulty in coaxing him to walk a few steps—when he knows that he will get a handful of oats or a carrot for his obedience.

Teaching Him To Walk

For everyday use, the most economical gait for a horse is a fast walk; and yet not half the thought is given to this essential that there is to other things that secure to the horse a name rather than intrinsic value. Colts can be taught to walk fast by following them for a half day together (some one leading) with a small switch, starting them, when inclined to go slow into a quicker pace. After they are harnessed keep fast walking in mind, and when on level ground, or going up a hill with a very light load, urge them to their utmost, until 4 miles an hour becomes a habit.

Teaching Him To Stand

Take your horse on the barn floor, and throw a strap over his back and fasten it to his right fore foot; lead him along and say "Whoa," and at the same time pull down the strap, which will throw him on 3 feet, and make him stop suddenly. This is the best way known to teach "Whoa," though you can put on the war bridle, and give him a sharp jerk that will stop him about as soon as the strap to his foot. Then put him in harness, with the foot strap, as directed under the head of "Training to Harness," and drive him up to the door. The moment he undertakes to move, take his foot and say "Whoa." Get in your carriage and get out again; rattle the thills; make all the noise getting in and out you can; give him to understand, by snatching his foot each time he moves, that he must stand until you tell him to go and after a few times you can put the whole family in the carriage, and he will not stir out of his tracks.

SECRETS FOR HUNTERS

The following secrets apply to all animals, as every animal is attracted by the peculiar odor in a greater or less degree; but it is best adapted to land animals, such as Foxes, Minks, Sables, Martins, Wolves, Bears, Wildcats, etc. Take one-half pound strained honey, one-quarter drachm musk, three drachms oil of lavender, and four pounds of tallow. Mix the whole thoroughly together, and make it into forty pills or balls, and place one of these pills under the pan of each trap when setting it. This preparation will most wonderfully attract all kinds of animals, and trappers and others who use it will be sure of success.

SECRET ART OF CATCHING FISH

Put the oil of Rhodium on the bait when fishing with a hook, and you will always succeed; or, take the juice of smellage or lovage, and mix with any kind of bait. As long as there remain any kind of fish within many yards of your hook, you will find yourself busy pulling them out. Or, get over the water after dark, with a light and a dead fish that has been smeared with the juice of stinking gladwin. The fish will gather around you in large quantities, and can easily be scooped up.

HOW TO BANISH AND PREVENT MOSQUITOES FROM BITING

Dilute a little of the oil of thyme with sweet oil, and dip pieces of paper into it. Hang in your room, or rub a little on the hands and face when going to bed.

Manufacturing Secrets

HOW TO BORE HOLES IN GLASS

Any hard steel tool will cut glass with great facility when kept freely wet with camphor dissolved in turpentine. A drill-bow may be used, or even the hand alone. A hole bored may be readily enlarged by a round file. The ragged edges of glass vessels may also be thus easily smoothed by a flat file. Flat window glass can readily be sawed by a watch spring saw by aid of this solution. In short, the most brittle glass can be wrought almost as easily as brass by the use of cutting tools kept constantly moist with camphorized oil of turpentine.

HOW TO ETCH ON GLASS

Procure several thick, clear pieces of crown glass, and immerse them in melted wax, so that each may receive a complete coating, or pour over them a solution of wax in benzine. When perfectly cold draw on them, with a fine steel point, flowers, trees, houses, portraits, etc. Whatever parts of the drawing are intended to be corroded with the acid should be perfectly free from the least particle of wax. When all these drawings are finished the pieces of glass must be immersed one by one in a square leaden box or receiver, where they are to be submitted to the action of hydrofluoric acid gas, made by acting on powdered fluor-spar by concentrated sulphuric acid. When the glasses are sufficiently corroded they are to be taken out, and the wax is to be removed by first dipping them in warm and then in hot water, or by washing with turpentine or benzine. Various colors may be applied to the corroded parts of the glass, whereby a very fine painting may be executed. In the same manner sentences and intitials of names may be etched on wineglasses, tumblers, etc.

HOW TO COPY LETTERS WITHOUT A PRESS

A black copying ink, which flows easily from the pen, and will enable any one to obtain very sharp copies without the aid of a press, can be prepared in the following manner: One ounce of coarsely broken extract of logwood and two drachms of crystallized carbonate of soda are placed in a porcelain capsule with eight ounces of distilled water, and heated until the solution is of a deep red color, and all the extract is dissolved. The capsule is then taken from the fire. Stir well into the mixture one ounce of glycerine of specific gravity of 1.25, fifteen grains of neutral chromate of potash, dissolved in a little water, and two drachms of finely pulverized gum arabic, which may be previously dissolved in a little hot water so as to produce a mucilaginous solution. The ink is now complete and ready for use. In well closed bottles it may be kept for a long time without getting mouldy, and, however old it may be, will allow copies of writing to be taken without the aid of a press. It does not attack steel pens. This ink cannot be used with a copying press. Its impression is taken on thin moistened copying paper, at the back of which is placed a sheet of writing paper.

HOW TO MAKE A CLOCK FOR 25c

First you get a sheet of stout mill-board, such as is used by bookbinders. This will cost you from six to ten cents. Get size twenty-seven by twenty-two inches. Draw two lines the longest way equally distant from the edge and each other. This divides it into three parts of the same size. Now from the top measure off ten inches for the face, and then with your knife partly cut the board through the rest of the lines below the face, and bend them back and glue together by putting a strip of cloth over the edges where they meet. Mark out the face of your clock, and make a hole for the hands. Go to your tinman, and he will make you a funnel-shaped spout, which you must glue on the bottom. Then make a spool like a cone—running to a point on one end—and eight inches across on the other. Wind a string on this cone, commencing at the large end, and winding down just as you would a top. Tie to the end a conical ink bottle filled with sand. Make some wooden hands, and put them on the face. Then fill your box, now made, with sand and when it is hung up the sand will run out slowly at the bottom, and as the sand goes out the weights lower, and turn the wheel, which makes the hands go around. It will depend upon the size of the hole at the bottom as to how fast it runs. You can paint it, and make it quite an ornament and curiosity in your house.

TO PLATE AND GILD WITHOUT A BATTERY

A very useful solution of silver or gold for plating or gilding without the aid of a battery may be made as follows: Take say 1 ounce of nitrate of silver, dissolved in 1 quart of distilled or rain water. When thoroughly dissolved, throw in a few crystals of hyposulphite of soda, which will at first form a brown precipitate, but which eventually becomes redissolved if sufficient hyposulphite has been employed. A slight excess of this salt must, however, be added. The solution thus formed may be used for coating small articles of steel, brass or German silver, by simply dipping a sponge in the solution and rubbing it over the surface of the article to be coated. I have succeeded in coating steel very satisfactorily by this means, and have found the silver so firmly attached to the steel (when the solution has been carefully made) that it has been removed with considerable difficulty. A solution of gold may be made in the same way and applied as described. A concentrated solution either of gold or silver thus made, may be used for coating parts of articles which have stripped or blistered, by applying it with a camel hair pencil to the part, and touching the spot at the same time with a thin clean strip of zinc.

HOW TO MAKE A CHEAP GALVANIC BATTERY

1. Procure about twenty copper pennies, (if worn smooth so much the better) or get some sheet copper, cut circular and of a large diameter, and the same number similar pieces of zinc. The latter may be formed by the constructor himself; being very easily melted, it may be cast in a mold like lead, or it may be procured in a sheet, and cut similar to copper. Then provide the same number of pieces of cloth, which must be soaked in a solution of common salt and water; or what is better, a liquid composed of one part of sulphuric acid, two of nitric acid and sixty of water. After this is done, place one of the pieces of zinc in a tea saucer, and on it put one of the pennies, or pieces of sheet-copper; on this place a piece of cloth, and so continue making a pile—zinc, copper, cloth—until they are all piled on one another; taking care to make the same arrangement throughout. The piece on the top, which will be a penny, should have a copper wire, which, for some experiments, should be tipped with platinum wire soldered to it, and the lower piece, which will be zinc, should be treated in the same manner. From the ends of these wires a stream of galvanic fluid will constantly issue, until all the acid is absorbed from the pieces of cloth, and although the apparatus is on a very small scale, a variety of exceedingly interesting experiments may be performed with it.—2. Take a cylindrical vessel and put another of porous porcelain inside of it; fill the vessel with diluted sulphuric acid, and the space between the two with sulphate of copper (if you require to plate the article with copper;) if not a solution of the salt of gold, silver, etc., according to that which you wish it to be; put a slip of zinc in the sulphuric acid, and attach a copper wire to it, and the other end to the metal or article you wish to plate, and immerse that in the other solution. Your battery is now complete. If you want the copper to be very thick, you must put a few solid crystals of copper in the solution; where you do not want it to come in contact, you must touch it with a little grease; if you want to take the copper off the article you must do it over with a slight varnish.

Household Hints

HOW TO PURIFY WATER FOR DRINKING

Filter river-water through a sponge, more or less compressed, instead of stone or sand, by which the water is not only rendered more clean, but wholesome; for sand is insensibly dissolved by the water, so that in four or five years it will have lost a fifth part of its weight. Powder of charcoal should be added to the sponge when the water is foul or fetid. Those who examine the large quantity of

terrene matter on the inside of tea-kettles, will be convinced all water should be boiled before drunk, if they wish to avoid being afflicted with gravel or stone, etc.

CHEMICAL WASHING PREPARATION

Take a ¼ of a pound of soap, a¼ of a pound of soda, and a ¼ of a pound of quicklime. Cut up the soap, and dissolve it in 1 quart of boiling water; pour 1 quart of boiling water over the soda, and 3 quarts of boiling water upon the quicklime. The lime must be quick and fresh; if it is good, it will bubble up on pouring the hot water upon it. Each must be prepared in separate vessels. The lime must settle so as to leave the water on the top perfectly clear; then strain it carefully (not disturbing the settlings) into the washboiler with the soda and soap; let it scald long enough to dissolve the soap; then add 6 gallons of soap water. The cloths must be put in soak over night, after rubbing soap upon the dirtiest parts of them. After having the above in readiness, wring out the clothes which have been put in soak, put them on to boil, and let each lot boil half an hour; the same water will answer for the whole washing. After boiling each lot half an hour, drain them from the boiling water, put them in a tub, and pour upon them two or three pailfuls of clear, hot water; after this they will want but very little rubbing; then rinse through two waters, bluing the last. When dried, they will be a beautiful white. After washing the cleanest part of the white cloths, take 2 pails of the suds in which they have been washed, put it over the fire and scald, and this will wash all the flannels and colored clothes, without any extra soap. The white flannels, after being well washed in the suds, will require to be scalded by turning on a teakettle of boiling water.

HOW TO PREVENT ALTERATIONS IN WRITING

If you should desire at any time to write a document in such a manner as to render attempts at altering or falsifying your manuscript impossible, bear in mind a hint given in a French paper-makers' journal, that by steeping paper in a very weak solution of gallic acid, you obtain a writing surface upon which ordinary ink makes a mark that defies deceitful erasure or alteration, by rendering any attempt at such easily detectable.

HOW TO PRESERVE STEEL KNIVES FROM RUST

Never wrap them in woolen cloths. When they are not to be used for some time, have them made bright and perfectly dry; then take a soft rag, and rub each blade with dry wood ashes. Wrap them closely in thick brown paper, and lay them in a dry closet. A set of elegant knives, used only on great occasions, were kept in this way for over a hundred years without a spot of rust.

HOW TO SAVE SHOE SOLES

It consists merely in melting together tallow and common resin, in the proportion of two parts of the former to one of the latter, and applying the preparation hot, to the soles of the boots or shoes—as much of it as the leather will absorb.

REMEDY FOR DRUNKENNESS

Tartar emetic 8 grains, and rose-water 4 ounces. Mix. Put a tablespoonful into the whole quanity of liquor drank each day by the patient, and let him take it as usual. Be careful not to exceed a tablespoonful or ½ an ounce.

PAPER HANGING

The first thing to be thought of is the selection of paper hangings. According to the taste of judgement with which the pattern is chosen, so will the appearance of the room, when papered, be agreeable or displeasing. Large patterns should, of course, be only used in large rooms. Dark-tinted papers are most suitable for light rooms, and light papers for dark rooms; many a dingy or gloomy apartment may be made to wear a cheerful aspect by attention to this particular. Stripes, whether on a lady's dress, or on the walls of a room, always give the effect of height; consequently a low room is improved by being hung with a striped paper. The effect is produced by a wavy stripe as well as a straight one, and, as curved lines are the most graceful, they should generally be preferred. Any pattern with lines crossed so as to form a square, is unsuitable for a low room; but with the lines made sloping or diagonal, there is not the same objection. A diamond trellis pattern, with a small plant creeping over it, looks well in a small summer parlor. For a common sitting-room, a small geometrical pattern is very suitable; being well covered, it does not show accidental stains or bruises, and, in the constant repetition of the design, there is no one object to attract the eye more than another. These are sometimes called Elizabethan patterns; they are much used for staircases, halls and passages, but they are not to be chosen at random. According to the height and dimensions of the passage or staircase, such should be the pattern. A large pattern on a narrow staircase, and in a passage not more than eight feet in height, has a very heavy and disagreeable effect. A light gray, or yellow marble, divided into blocks by thin lines, and varnished, will be found suitable for most passages, if care be taken to adapt the size of the blocks to the place where they are to appear. A size that would look well in a hall twenty feet wide, would be altogether too large in one of only four or six feet. Many persons must have noticed, in their visits of business or pleasure, that some houses present a cheerful aspect as soon as the door is opened, while others look so dull that they make one low-spirited upon entering them. The difference is caused by the good or bad taste with which they have been papered and painted. A safe rule with regard to paper hangings, is to choose nothing that looks extravagant or unnatural. Regard should be had to the uses of an apartment; a drawing-room should be light and cheerful; a parlor should look warm and comfortable without being gloomy; bedroom papers should be cool and quiet, and generally of a small pattern, and of such colors as harmonize with bed-furniture and other fittings. It is worth while to consider the sort of pictures to be hung on a wall; gilt frames show best on a dark ground, and dark frames on a light ground; taking care however to avoid violent contrasts. Heavy borders are seldom used now; they make a room low, without being ornamental.

The paper being purchased, the walls should next be looked to, in order to be sure that they are in proper condition to hold the paper. A new unwhitewashed wall will absorb the paste so rapidly that, before drying, there will be left too little body of paste on the surface to hold the paper. A coating of glue size, made by dissolving a half a pound of glue in a gallon of water, or a coating of good paste, put on and allow-

ed to dry before the paper is hung, will provide for this difficulty.

If the wall has already been papered it should be removed. Many lives have been lost from the laziness or ignorance of paper-hangers, who have laid on one paper above another, instead of tearing off the old one before hanging the new. There was a very handsome house near one of our provincial towns which could never keep its tenants, and at last stood empty and became worthless, because a detestable fever seized upon every family that lived in it. A ready-witted observer promised the owner to find out the cause. He traced the mischief to one room, and presently conjectured what was the matter there. He set a slip of glass into the wall, and found it the next day filmed with a fetid condensed vapor. He tore down a strip of paper, and found abundant cause for any amount of fever. For generations the walls had been papered fresh, without the removal of anything underneath. And there was the putrid size of old paper inches deep! A thorough clearance, and scraping, and cleaning, put an end to the fever, and restored the value of the house.

If the wall be whitewashed, it should be scratched with a stiff brush, to remove every particle of loose lime from the surface; after which it should be thoroughly swept down with a broom, and coated with the glue size or thin paste.

A long table of thin boards cleated together and placed on wooden horses, such as are used by carpenters, a pair of sharp shears—with long blades if possible—a whitewash brush, a pail for paste, and a yard of cotten cloth, are the implements required. The table or board platform should be level on its upper surface to facilitate the distribution of the paste. The latter should be free from lumps, and should be laid on as evenly as possible. It should be made of good sweet rye or wheat flour, beaten smooth in cold water before boiling, and should not be allowed to boil more than a minute or two, but should be raised to the boiling point slowly, being continually stirred till it is taken from the fire.

Inexpert hands often find difficulty in making the patterns match in the juxtaposed pieces. No general directions can be given for this, but a little study at the outset will often save cutting to waste, and other difficulties. In this matter, as in others, it is wise to "first be sure you are right, then go ahead." As soon as the proper way to cut the paper is decided upon, a whole roll, or more may be cut at once, and the pieces laid, printed side downwards, upon the table, weights being placed upon the ends to prevent curling. The paste should then be applied to the back of the uppermost piece, as expeditiously as possible, as the longer the time employed in this part of the operation, the more tender will the paper get, and the more difficult it will be to lay it properly.

The upper end of the piece should then be taken by the corners, and the operator, stepping upon a bench or stepladder, should barely stick the piece at the top, and in such a manner that the edge shall coincide with the piece previously hung; this can be done by sighting down the trimmed edge of the piece, while it is held in the hands. The cloth should should now be held in a loose bunch, and the paper smoothed with it from top to bottom, care being taken to work out all air from under the paper, which, if not thoroughly done, will give it a very unsightly blistered appearance.

If the wall be uneven or crooked, as is often the case in old houses, it will be difficult to avoid wrinkles, but they can be mostly got rid of, by cutting the paper and allowing the cut edges to lap over each other, in places where there would otherwise be a wrinkle.

By following these directions the most inexperienced will be able to do a reasonably tidy piece of work, but of course much skill is only secured by practice.

HOW TO CLEAN WALL PAPER

Cut into 8 half-quarters a state bread loaf; with one of these pieces, after having blown off all the dust from the paper to be cleaned by means of a good pair of bellows, begin at the top of the room, holding the crust in hand, and whiping lightly downward with the crumb, about half a yard at each stroke, till the upper part of the hangings is completely cleaned all round; then go again round with the like sweeping stroke downward, always commencing each successive course a little higher than the upper stroke had extended, till the bottom be finished. This operation, if carefully performed, will frequently make very old paper look almost equal to new. Great caution must be used not by any means to rub the paper hard, nor to attempt cleaning it the cross or horizontal way. The dirty part of the bread too must be each time cut away, and the pieces renewed as often as is necessary.

PASTE FOR PAPER HANGING

A new form of paste for attaching paper hangings to walls, and one which, besides possessing the merit of cheapness, has the advantage of preventing the paper from separating or peeling off, is prepared by first softening 18 pounds of finely powdered bole in water, and then draining off the surplus water from the mass. One and a quarter pounds of glue are next to be boiled into glue water, and the bole and two pounds of gypsum are then stirred in, and the whole mass forced through a sieve by means of a brush. This is afterwards diluted with water to the condition of a thin paste or dressing, when it is ready for use. This paste is not only much cheaper than the ordinary flour paste, but it has the advantage of adhering better to whitewash surfaces, especially to walls that have been coated over several times, and from which the coating has not been carefully removed. In some cases it is advisable, when putting fine paper on old walls, to coat them by means of this paste with a ground paper, and to apply the paper hanging itself to this with the ordinary paste.

HOW TO CLEAN CARPETS

Carpets may be cleaned as follows: Take them up and shake and beat them, so as to render them perfectly free from dust. Have the floor thoroughly scoured and dry, and nail the carpet firmly down upon it. If still much soiled, it may be cleaned in the following manner: Take a pailful of clean cold spring water, and put into it about 3 gills of ox-gall. Take another pail with clean cold water only. Now rub with a soft scrubbing brush some of the ox-gall water on the carpet, which will raise a lather. When a convenient sized portion is done, wash the lather off with a clean linen cloth dipped in the clean water. Let this water be changed frequently. When all the lather has disappeared rub the part with a clean dry cloth. After all is done, open the window to allow

the carpet to dry. A carpet treated in this manner will be greatly refreshed in color, particularly the greens. In nailing down a carpet after the floor has been washed, be certain that the floor is quite dry, so the nails will not rust and injure the carpet. Fuller's earth is used for cleaning carpets, and weak solution of alum, or soda are used for reviving the colors. The crumb of a hot wheaten loaf rubbed over a carpet has been found effective.

HOW TO REMOVE GREASE FROM CARPETS

1. Mix a little soap in a gallon of warm soft water, then add half an ounce of borax; wash the part well with clean cloth, and the grease or dirty spot will soon disappear. 2. Cover the grease spot with whiting, and let it remain until it becomes saturated with the grease; then scrape it off and cover it with another coat of whiting, and if this does not remove the grease, repeat the application. Three coats of whiting will, in most cases, remove the grease, when it should be brushed off with a clothes brush. If oil has been spilt on a carpet, that part of the carpet must be loosened up, and the floor beneath it well scrubbed with warm soap and water, and fuller's earth; otherwise the grease will continue to come through.

HOW TO KEEP HOUSES COOL IN HOT WEATHER

In very hot days a cool apartment is a real luxury to be had far oftener than most people suppose possible. The secret consists, not in letting in cool air, for naturally all do that whenever they have the chance; but in keeping out the hot air. If the air outside a room or house be cooler than the air inside, let it in by all means; but if it be hotter, carefully keep it out. A stair-case window left open during the night will often cool the passages of a house, and the rooms, too, if their doors are not shut; but it must be closed at 8 or 9 o'clock, in the morning, or, if on the sunny side, at 4 or 5 o'clock, and the blind drawn down. The mistake people generally make is to throw open their windows at all hours of the day, no matter whether the atmosphere outside be cool or scorching. Let us have some air, they say, and in comes the treacherous breeze—for even hot air is pleasant while it is gently blowing, taking away perspiration, and thereby cooling the skin; but the apartment is made warmer, instead of cooler, and as soon as they move out of the draught they find their room to be more uncomfortable than before. Let in cool air—keep out hot—that is the only formula to insure the minimum of discomfort. Sitting-rooms may generally be kept cool during the whole day if the doors be only opened for egress, and the windows kept closed and shielded from direct sunshine by a blind. If the atmosphere of a room be impure from any cause, let it be renewed; hot air is less injurious than bad air. If a room be small in comparison with the number of persons engaged in it, free ventilation becomes indispensable.

HOW TO PRESERVE GREASE

Boil all the scraps, rinds, and bones, in a weak lye, and the purer grease in clear water. Let the mixture cool, take off the cake of grease, and strain it. It is well to do this occasionally, as you save it; for when kept a long time, impure grease becomes offensive. You must be careful to dry off all the water before laying it away in your grease tub, if you wish it to keep sweet.

HOW TO PURIFY GREASE

If the grease is very foul in smell, it should be put into a boiler with water, on the fire (about three times as much water as of the grease), a small quantity (say a teaspoonful for five to ten pounds of grease) of permanganate of potash added, by stirring, to the whole, and after the mixture has cooled a little, it is strained through a cloth, and allowed to rest, when the cake of fat is taken out and put in a cool place, or in the pot in which it is to be remelted for transformation into soap. The purpose of the permanganate of potash is to remove the rank odor of the grease, which otherwise would contaminate the soap also.

JACKSON'S UNIVERSAL WASHING COMPOUND

Two and a-half pounds of sal soda; one-half pound of borax; one-quarter pound of rosin; two ounces of salts tartar; one ounce of liquid ammonia; dissolve the soda, borax and rosin in four quarts of water, and let it boil ten minutes; when cold, add salts of tartar and ammonia, with four gallons of water; keep corked tight. Directions for using: Put your clothes in clear water the night before you want to wash; in the morning wring them out and place them in a tub; then put in your boiler five gallons of water, one-half pint washing compound, one-half pint of soft soap; when quite hot, but not boiling, pour it over your clothes; cover them, and let them stand twenty minutes, when they are ready to be looked over, and the streaks can be easily rubbed out with the hands; have ready in your boiler the same quantity of water, soap and compound; put in your clothes, let them come to a boil, when they are ready to rinse and hang up; do not let them boil too long, or they will be yellow. The same water that your first clothes were washed through will do for the next by being heated again.

GERMAN WASHING FLUID

The use of soda for washing linen is very injurious to the tissue and imparts to it a yellow color. In Germany and Belgium, the following mixture is now extensively and beneficially used: 2 lbs. of soda are dissolved in about 5 gallons of water as hot as the hand can bear it; then next is added to this fluid, three large sized tablespoonfuls of liquid ammonia and one spoonful of best oil of turpentine. These fluids are incorporated rapidly by means of beating them together with a small birch broom. The linen is then soaked in this liquid for three hours, care being taken to cover the washing tub by a closely fitting wooden cover. By this means the linen is thoroughly cleaned, saving much rubbing, time and fuel. Ammonia does not affect the linen or woolen goods, and is largely used as a washing liquid in the North of England.

METHODS FOR DESTROYING RATS

1. Mix some fine plaster of Paris with an equal quantity of flour; put the mixture in the place infested by the vermin, and a vessel full of water beside it. The rats will devour the mixture, and then drink; whereupon the plaster, brought into contact with the water, will become solid, and like a stone in their stomachs, which will cause their death. This method is evidently highly preferable to the use of arsenic, which is always attended with danger. 2. Flour 6 pounds; sugar, 1 pound; sulphur, 4 pounds; phosphorus, 4 pounds. 3. When a house is infested by rats which refuse to nibble at toasted cheese,

and the usual baits, a few drops of the highly scented oil of rhodium, poured on the bottom of a cage top, will always attract before morning. Where a trap baited with all manner of edibles had failed to attract a single rat, the oil of rhodium caused it to be completely crowded night after night. 4. Mix powdered nux vomica with oatmeal, and lay it in their haunts, observing proper precaution to prevent accidents. 5. (Phosphorus paste.) Take of phosphorus, 8 parts; liquefy it in 180 parts of luke-warm water, pour the whole into a mortar, and add immediately 180 parts of rye meal; when cold, mix 180 parts of butter melted, and 125 parts of sugar. If the phosphorus is in a finely-divided state, the ingredients may be all mixed at once, without melting them. This mixture will retain its efficacy for many years, for the phosphorus is preserved by the butter and only becomes oxidized on the surface. Rats and mice eat this mixture with avidity, after which they swell out and soon die. 6. Cover the floor near their holes, with a thin layer of moist caustic potash. When the rats walk on this it makes their feet sore. These they lick with their tongues, which makes their mouths sore, and the result is that they not only shun this locality, but appear to tell all the neighboring rats about it, and evidently the house is entirely abandoned by them, notwithstanding that the neighborhood may be teeming with them. 7. Corks, cut as thin as wafers, roasted or stewed in grease, and placed in their tracks; or dried sponge in small pieces, fried or dipped in honey, with a little oil of rhodium, or bird-lime laid in their haunts, will stick to their fur and cause their departure. If a live rat be caught and well rubbed or brushed over with tar and train-oil, and afterwards put to escape in the holes of others, they will disappear.

HOW TO WASH DISHES

First make sure before breakfast or dinner that there is plenty of water in the boiler, and also in the tea-kettle. After the table is cleared, the tablecloth brushed off and neatly folded away and the dining-room disposed of, proceed with your dishes. First take a large dish-pan, put into it a piece of soap, and pour over the soap three or four dipperfuls of hot water from the boiler. Then add 2 or 3 dipperfuls of cold soft water. The water should now be so cool as not to turn the hands red when put into it. Take the dish-cloth and rub from the soap the melted surface, and put the remainder away. Wash a dish at a time and pass it to another pan. When all are done or the pan is full, take the tea-kettle and pour over enough hot water to thoroughly rinse and heat them. Now take them from the water, one at a time, and place them bottom-side up upon a tray or pan to drain. If they have been properly washed, this hot rinsing water will run or evaporate in a minute, leaving the dishes nearly dry. However, they should now be wiped with a clean, dry towel, and put away. Dishes must be washed in soft water. Especially is this necessary where soap is used. And soap is really indispensable in washing dishes properly. The dishes should be scraped free from grease, crumbs, bones, etc., before commencing to wash them. A neat house-keeper will have the same dish-cloth in use until it is worn out, when it should be put into the ragbag. Never allow the dish-cloth to be used for anything else but washing dishes.

ANTIDOTES FOR POISONING

The first thing to be done, when a person has swallowed a poison of any kind, is to empty the stomach, by taking a teaspoonful of common salt and the same quantity of ground mustard stirred rapidly in a teacup of water, warm or cold and swallowed instantly. Next give water to drink, cold or warm, as fast as possible, a quart or more at a time, and as fast as vomited drink more; tepid water is best, as it opens the pores of the skin, and thus gives the speediest cure to the poisonous article. If pains begin to be felt in the bowels, it shows that part at least of the poison has passed downwards; then large and repeated injections of tepid water should be given, the object in both cases being to dilute the poison as quickly and as largely as possible. Do not wait for warm water—take that which is nearest at hand, cold or warm, for every second of time saved is of immense importance. It has been found that there is hardly any poison which, being diluted in a sufficient quantity with water, may not prove inoffensive. This virtue, coupled with its universal availability, makes it a valuable remedial agent in poisoning.

HOW TO EXTINGUISH FIRE IN A CHIMNEY

One of the simplest methods is to scatter a handful of flowers of sulphur over the dullest part of the burning coals, the mephitic vapors arising from which will not support combustion, and consequently extinguish the flames. Another method is to shut the doors and windows, and to stop up the bottom of the chimney with a piece of wet carpet or blanket, throwing a little water or flowers of sulphur, or salt, on the fire immediately before doing so. By this means the draught is stopped, and the burning soot must be extinguished for want of air. If the chimney be stopped at the top, instead of the bottom, the whole of the smoke must of course, be driven into the apartment. If every fireplace were provided with a damper, or shutter of sheet-iron or tin plate, sufficiently large to choke it thoroughly, fires in chimneys would become of little consequence, as it would only be necessary to apply this damper to put them out.

TO MAKE BREAD WITHOUT FLOUR

A Frenchman named Sezille has discovered a method of making bread from unground wheat, without first grinding and bolting it into flour. The making of bread by this new system is a three-fold process—namely, washing the wheat, fermentation, and the final admixture and flavoring. The grain is put in a vessel, covered with water, and stirred until the lighter grains and extraneous particles are either dissolved or left floating on the surface. The mass is then freed from the water, and put into a cylinder, like a nutmeg-grater, whose revolutions remove the outer skin of the grain. This is all that is really necessary to remove. Next, the wheat thus cleansed is immersed in twice its own weight of water, heated to 75 degrees, to which has been added 1 part of half-dry yeast, and 5 or 6 oz. of glucose to 200 parts of water. A day's exposure to this bath secures the necessary degree of absorption and fermentation, and the color will also have been extracted from exterior surface of the grain. The water being then removed, the wheat will be not far from white in color. Next the stiffened mass is put through rollers, which mash it into a

glutinous pulp, and mix regularly through the whole bulk all the remaining particles of skin or bran. The dough—for such it now is—is then put into a trough, flavored with salt which has been dissolved in water, and given an opportunity to absorb more water if necessary, and then thoroughly kneaded by hand. Nothing, now, is needed but to treat it just as flour-dough is treated, and, when sufficiently light, hand it over to the oven. It is claimed that by this process the eater secures the entire nutriment of the wheat, and that it produces ⅛ more bread than under the present system. It is probable that the bread thus made will lack that whiteness which is so much sought after by modest housewives, but then the result will be most nutritious. Owing, however, to the time consumed in preparing the grain for the oven, it is not likely that this new process will for some time to come supersede the old-fashioned method of setting a sponge over-night for the next day's baking.

HOW TO REMOVE IRON RUST

Every particle of rust on iron may be removed by first softening it with petroleum, and, rubbing well with coarse sand-paper. To paint iron, take lampblack sufficient for two coats, and mix with equal quantities of Japan varnish and boiled linseed oil.

HOW TO PRESERVE CLOTHING AND FURS FROM MOTHS

1. Procure shavings of cedar-wood, and enclose in muslin bags, which should be distributed freely among the cloths.—2. Procure shavings of camphorwood, and enclose in bags.—3. Sprinkle pimento (allspice) berries among the clothes.—4. Sprinkle the clothes with the seeds of musk plant.—5 An ounce of gum camphor and one of the powdered shell of red pepper are macerated in 8 ounces of strong alcohol for several days, then strained. With this tincture the furs or clothes are sprinkled over, and rolled up in sheets.—6. Carefully shake and brush woolens early in the spring, so as to be certain that no eggs are in them; then sew them up in cotton or linen wrappers, putting a piece of camphor gum, tied up in a bit of muslin, into each bundle, or into the chests and closets where the articles are to lie. No moth will approach while the smell of camphor continues. When the gum is evaporated, it must be renewed. Enclose them in a moth-proof box with camphor no matter whether made of white paper or white pine, before any eggs are laid on them by early spring moths. The notion of having a trunk made of some particular kind of wood for this purpose, is nonsense. Furs or woolens, put away in spring time, before moth eggs are laid, into boxes, trunks, drawers, or closets even, where moths cannot enter, will be safe from the ravages of mothworms, provided none were in them that were laid late in the autumn for they are not of spontaneous production.

HOW TO DESTROY HOUSE FLIES

House flies are present just in proportion to the dirt and uncleanliness there is in a house. The cleaner the house and surrounding, the fewer flies there will be.—1. They may be effectually destroyed by putting half a spoonful of black pepper in powder on a teaspoonful of brown sugar, and one teaspoonful of cream; mix them well together and place them in a room where the flies are troublesome and they will soon disappear.—2. The butchers of Geneva have, from time immemorial, prevented flies from approaching the meat which they expose for sale, by the use of laurel oil. This oil, the smell of which, although a little strong, is not very offensive, drives away flies; and they dare not come near the walls or wainscots which have been rubbed with it.—3. Flies are kept out of stables, (a place they propagate in great numbers) by using sawdust which is saturated with carbolic acid diluted—one part of acid to a hundred parts of water—the sawdust scattered about in stables keeps all flies away. A similar application of acid ought to keep them from kitchens.

HOW TO KILL MOTHS IN CARPETS

Wring a coarse crash towel out of clear water, spread it smoothly on the carpet, iron it dry with a good hot iron, repeating the operation on all parts of the carpet suspected of being infested with moths. No need to press hard, and neither the pile nor color of the carpet will be injured, and the moths will be destroyed by the heat and steam.

HOW TO PREVENT IVORY KNIFE HANDLES FROM CRACKING

Never let knife-blades stand in hot water, as is sometimes done to make them wash easily. The heat expands the steel which runs up into the handles a very little, and this cracks the ivory. Knife handles should never lie in water. A handsome knife, or one used for cooking, is soon spoiled in this way.

HOW TO FASTEN LOOSE KNIFE HANDLES

The best cement for this purpose consists of one pound of colophony (purchasable at the druggist's) and eight ounces of sulphur, which are to be melted together, and either kept in bars or reduced to powder. One part of the powder is to be mixed with a part of iron filings, fine sand or brick dust, and the cavity of the handle is then to be filled with this mixture. The stem of the knife or fork is then firmly inserted and kept in position until the cement hardens.

HOW TO CLEAN AND BRIGHTEN MATTING AND OILCLOTH

Wash it twice during the summer with salt and water, say about a pint of salt, dissolved in half a pailful of warm, soft water, drying the matting quickly with a soft cloth. The salt will prevent it from turning yellow. Another plan is, after the oilcloth is scrubbed and dried, to rub it all over with a cloth dipped in milk. This will bring the colors out very bright.

HOW TO PREVENT RUST IN TEA-KETTLES

Keep an oyster-shell in your tea-kettle. By attracting the stony particles to itself, it will prevent the formation of a crust.

HOW TO TAKE INK OUT OF BOARDS

Strong muriatic acid, or spirits of salt, applied with a piece of cloth; afterwards well washed with water.

HOUSEHOLD WEIGHTS AND MEASURES

Wheat flour weighs one pound to a quart. Butter, when soft, one pound to a quart. Indian meal, one pound two ounces to a quart. Loaf sugar, broken, one pound to a quart. White sugar, powdered, one pound one ounce to a quart. Eggs, average size, ten to a pound.

HOW TO REMOVE TASTE FROM NEW WOOD

New keg, churn, bucket, or other wooden vessel will generally communicate a disagreeable odor to anything that is put into it. To prevent this inconvenience first scald the vessel with boiling water, letting the water remain in it till cold. Then dissolve some pearl ash or soda in lukewarm water, adding a little bit of lime to it, and wash the inside of the vessel well with the solution. Afterward scald it well with plain hot water, and rinse it with cold water before you use it.

HOW TO TAKE CARE OF CANARIES

Especial care must be taken to keep the canary thoroughly clean. For this purpose the cage should be strewed every morning with clean sand, or rather, fine gravel, for small pebbles are absolutely essential to life and health in cage birds; fresh water must be given every day, both for drinking and bathing; the latter in a shallow vessel; and, during the moulting season, a small bit of iron should be put into the water for drinking. The food of a canary should consist principally of summer rape-seed, that is, of those small brown rape-seeds which are obtained from plants sown in the spring, and which ripen during the summer; large and black rape-seeds, on the contrary, are produced by such plants as are sown in autumn, and reaped in spring. A little chick-weed in spring lettuce leaves in summer and endive in autumn, with slices of sweet apple in winter, may be safely given, but bread and sugar ought to be generally avoided. Occasionally also, a few poppy or canary seeds, and a small quantity of bruised hemp-seed may be added, but the last very sparingly. Cleanliness, simple food and fresh but not cold air are essential to the well-being of a canary. During the winter, the cage should never be hung in a room without a fire, but even then, when the air is mild, and the sun shines bright, the little prisoner will be refreshed by having the window open. The cage should never be less than eight inches in diameter, and a foot high, with perches at different heights.

HOW TO CLEAN PAINT

Provide a plate with some of the best whiting to be had, and have ready some clean warm water and a piece of flannel, which dip into the water and squeeze nearly dry; then take as much whiting as will adhere to it, apply it to the painted surface, when a little rubbing will instantly remove any dirt or grease. After which wash well with clean water, rubbing it dry with soft flannels. Paint thus cleaned looks as well as when first laid on, without any injury to the most delicate colors. It is far better than using soap, and does not require more than half the time and labor.

HOW TO DESTROY COCKROACHES AND BEETLES

1. Strew the roots of black hellebore, at night, in the places infested by these vermin, and they will be found in the morning dead, or dying. Black hellebore grows in marshy grounds, and may be had at the herb shops.

2. Put about a quart of water sweetened with molasses in a tin wash basin or smooth glazed china bowl. Set it at evening in a place frequented by bugs. Around the basin put an old piece of carpet that the bugs can have easy access to the top. They will go down in the water and stay till you come.

3. Take pulverized borax 4 parts, flour 1 part, mix intimately and distribute the mixture in cupboards which are frequented by the roaches, or blow it, by means of a bellows, into the holes or cracks that are infested by them.

4. By scattering a handful of fresh cucumber parings about the house.

5. Take carbonic acid and powdered camphor in equal parts; put them in a bottle; they will become fluid. With a painter's brush of the size called a sash-tool, put the mixture on the cracks or places where the roaches hide; they will come out at once; then kill.

6. Mix up a quantity of fresh burned plaster of Parts (gypsum, such as is used for making molds and ornaments) with wheat flour and a little sugar, distribute on shallow plates and box board, and place it in the corners of the kitchen and pantry, where they frequent. In the darkness they will feast themselves on it. Whether it interferes with the digestion or not, is difficult to ascertain, but afer three or four night renewals of the preparation, no cockroaches will be found on the premises.

HINTS ON MARKETING

The purchaser will do well to keep in view one or two simple rules. Whatever kind of provisions may be required, it is invariable the wisest course to deal with those trades-people who have a large business, and who are known and respectable. It is the interest of such persons to supply their customers with the best articles, and for this purpose they themselves must go to the best markets. As a general rule they are under no temptation to overcharge their customers. Their success in business and their profit depend on the number of their retail transactions, and if the number be great, they are all the more able to supply the best articles, and to be content with the smallest profit on each individual sale. As an illustration of this it may be stated that, with very few exceptions, all commodities are dearer, as well as of inferior quality, in shops in suburbs than in those situated in places of the greatest concourse: the reason is that small dealers, who have comparatively few transactions, must necessarily make up for the defects of their business by obtaining large profits on individual sales, while, at the same time, they have little or no encouragement to obtain the best goods, and in many cases want of sufficient capital renders this impracticable. It will be usually found, however, that there is no economy in purchasing inferior articles. In butcher's meat, for example, the best meat, and the best parts of the meat, although at first a little dearer, are in reality cheaper in the end.

HOW TO TEST KEROSENE OIL

The only reliable test is the temperature of the flashing point, that is, the temperature at which the petroleum takes fire when a burning match is applied to its surface. This test can be easily applied. Into a flat dish or saucer, pour the oil to be tried, until it is at least half an inch deep; then hold a burning match or paper near the surface. At the point of contact the combustion is often very lively, as the taper draws up some of the liquid, but if the petroleum be safe and free from naphtha, the flame does not spread over the surface. If the petroleum has been adulterated, as soon as the match touches the surface a blue lambent flame flashes across it, and in a few moments the

body of the oil will be on fire. Such an oil is dangerous—liable to explode in lamps, and to give off inflammable vapors at all times. Any oil which takes fire when a match is held near its surface, and continues to burn ought to be condemned at once and thrown away.

HOW TO MAKE UMBRELLAS LAST LONG

Most persons, when they come in from the rain, put their umbrellas in the rack with the handle upward. They should put it downward; because when the handle is upward the water runs down inside to the place where the ribs are joined to the handle, and cannot get out, but stays rotting the cloth and rusting the metal until slowly dried away. The wire securing the ribs soon rusts and breaks. If placed the other end up, the water readily runs off, and the umbrella dries almost immediately.

HOW TO BANISH AND DESTROY ANTS

1. Perfect cleanliness. —2. Pulverized borax sprinkled in places they frequent.—3. A few leaves of green worm-wood, scattered among their haunts.—4. Use of camphor. —5. A sponge can be sprinkled with sugar and laid upon shelves when ants are numerous; the next morning plunge quickly into boiling water, and most of the intruders will be destroyed—6. Caroblic acid wiped around the edges of the shelves and wherever they seem to come from.

HOW TO EXTERMINATE BED-BUGS

1. Perfect cleanliness. No bed-bugs or other vermin will infest a house, the mistress of which is of orderly and cleanly habits, and fine tastes.—2. Two ounces of red arsenic, ¼ of a pound of white soap, ½ an ounce of camphor dissolved in a teaspoonful of spirits rectified, made into a paste of the consistency of cream. Place this mixture in the openings and cracks of the bedstead.—3. Where bed-bugs are present the best, quickest and handiest exterminator is kerosene or crude petroleum oil, drenching all parts of the article of furniture thoroughly and effectively.

HOW TO GET RID OF FLEAS

The largest number of fleas are brought into our family circles by pet dogs and cats. The oil of pennyroyal will drive these insects off; but a cheaper method, where the herb flourishes, is to throw your cats and dogs into a decoction of it once a week. When the herb cannot be got, the oil can be procured. In this case, saturate strings with it and tie them around the necks of dogs and cats. These applications should be repeated every twelve or fifteen days. Mint, freshly cut and hung round a bedstead, or on the furniture, will prevent annoyance from bed insects; a few drops of essential oil of lavender will be more efficacious.

HOW TO PREVENT MOULD IN INK

The microscope has revealed the fact that mould is a plant, propagated like other plants; and any thing that will kill vegetation will prevent ink or any other mould. The common remedies applied for this purpose are cresote, carbolic acid, oil of cloves, bergamot, or many other ethereal oils, acetic acid, alcohol, corrosive sublimate, arsenic, etc.; but always added in comparatively small quantities.

HOW TO LAY CARPETS

Cover the floor with thick brown paper, which is sold in large rolls for the purpose; have the carpet properly fitted, and, on the binding of the edges, sew at regular distances small brass rings in such a manner that when the carpet is laid they will not appear beyond the edges. Round the side of the room drive medium-sized brass-headed nails, at the same distances from each other as the rings are sewed on the carpet; when ready, begin at the top of the room and hook the rings over the brass-headed nails, which must be driven into the floor far enough to admit of the rings catching a firm hold. When the top is hooked on, stretch the carpet to the opposite side and hook it on, then fasten the sides in like manner. This is much less troublesome and is more economical than nailing down carpets.

HOW TO MAKE STAIR CARPETS LAST

Slips of paper should always be placed over the edges of the stairs under the carpet. This will diminish the friction between the carpet and the boards underneath it. The strips should be in length within an inch or two of the width of the carpet, and four or five inches breadth, as convenient. This simple expedient will preserve the carpet half as long again as it would last without the strips.

HOW TO PREVENT FLIES FROM INJURING PICTURE FRAMES

Boil three or four onions in a pint of water; then with a gilding brush go over your glasses and frames, and the flies will not alight on the article so washed. This may be used without apprehension, as it will not do the least injury to the frames.

HOW TO CLEAN TIN

Never use lye to clean tin, it will soon spoil it. Make it clean with suds, and rub it with whiting, and it will look well, and last much longer.

HOW TO MEND TIN PANS

This can be done quickly and easily by the use of putty, and is much better than to throw them away. Put it on the outside; let it dry thoroughly, and they will never need mending in the same place again.

HOW TO REMOVE STAINS FROM BOOKS

To remove ink stains from a book, first wash the paper with warm water, using a camel's hair brush for the purpose. By this means the surface ink is got rid of; the paper must now be wet with a solution of oxalate of potash, or, better still, oxalic acid in the proportion of one ounce to half a pint of water. The ink stains will immediately disappear. Finally, again wash the stained place with clean water, and dry it with white blotting paper.

HOW TO CLEAN MARBLE

1. Brush the dust off the piece to be cleaned, then apply with a brush a good coat of gum arabic, about the consistency of a thick office mucilage, expose it to the sun or dry wind, or both. In a short time it will crack and peel off. If all the gum should not peel off, wash it with clean water and a clean cloth. Of course, if the first application does not have desired effect, it should be applied again.—2. Make a paste with soft soap and whiting. Wash the marble first with it, and then leave a coat of the paste upon it for two or three days. Afterwards wash off with warm (not hot) water and soap.—3. Chalk (in fine powder), 1 part; pumice, 1 part; common soda, 2 parts. Mix.

Wash the spots with this powder, mixed with a little water, then clean the whole of the stone, and wash off with soap and water.

HOW TO CLEAN SILVER ORNAMENTS

Boil them in soap and water for five minutes; then put them in a basin with the same hot soap and water, and scrub them gently with a very soft brush while hot; then rinse and dry with a linen rag. Heat a piece of common unglazed earthen ware, or a piece of brick or tile in the fire; take it off and place the ornaments upon it for the purpose of drying them, and causing every particle of moisture to evaporate; as the moisture, which otherwise would remain on the silver, will cause it to tarnish, or assume a greenish hue. All ornaments, whether gold or silver, can be kept from tarnishing, if they are carefully covered from the air in boxwood sawdust, which will also dry them after being washed.

HOW TO PREVENT BOOTS SQUEAKING

Squeaking boots and shoes are a great annoyance, especially in entering a sick room, or a church after the service has commenced. To remedy it, boil linseed oil and saturate the soles with the same.

HOUSE CLEANING

In cleaning a room, the carpet should come up first, not only because of the dust, but to give floor all day to dry, not leaving it to be scrubbed last, as we have seen some bad managers do, and pay for it by influenzas. Where the walls are papered, they should next be swept with a clean towel pinned firmly round a broom, if there is not a brush kept for the purpose. The ceilings of chambers are usually whitewashed; this is the next proceeding: and the walls scrubbed, if painted or hard finished. Then come windows and wood-work in all things being careful to use as little suds as will thoroughly answer the purpose. In cleaning wood-work, use little soap, but plenty of clean water, which will prevent discoloration. If dirty spots and patches are wiped off the year round, faithfully, there will be much less need of scrubbing the boards bare in "house-cleaning."

HOW TO SCOUR FLOORS

Take some clean, well-sifted sand, scatter it on the floor, have ready one ounce of potash dissolved in a pint of water, sprinkle it over the sand, and with a scrubbing brush and good mottled soap rub the boards along their length. Changing the water frequently and using it very hot, makes the boards white; the potash, if properly applied, will remove all stains.

HOW TO CLEAN LOOKING GLASSES

Take a newspaper, or part of one, according to the size of the glass. Fold it small, and dip it into a basin of clean cold water; when thoroughly wet, squeeze it out in your hand as you would a sponge, and then rub it hard all over the face of the glass, taking care that it is not so wet as to run down in streams. In fact, the paper must only be completely moistened, or damped all through. After the glass has been well rubbed with a wet paper, let it rest a few minutes, and go over it with a fresh dry newspaper (folded small in your hand) till it looks clear and bright—which it will almost immediately, and with no further trouble. This method, simple as it is, is the best and most expeditious for cleaning mirrors, and it will be found so on trial—giving it a clearness and polish that can be produced by no other process. It is equally convenient, speedy, and effective. The inside of the window frames may be cleaned in this manner to look beautifuly clear; the windows being first washed on the outside.

HOW TO WASH GRAINING

Take clear warm water, a clean, white cloth, and wash a small place and wipe dry with another clean white cloth. Do not wet any more space than you can dry immediately with your cloth as it must not be left to dry in the atmosphere; it must be rubbed dry, hence the necessity for clean white cloths. If the paint has been neglected until very much soiled with greasy fingers, or specked with a summer's growth of flies, a very little hard soap may be put in the first water, and then rinsed off with clear water, but avoid soap if you possibly can, as it dulls the varnish, however carefully used. On no account must it be rubbed on with a cloth.

HOW TO PREPARE SHEEP SKIN FOR MATS

Make a strong lather with hot water, and let it stand till cold, wash the fresh skin in it, carefully squeezing out all the dirt, from the wool: wash it in cold water till all the soap is taken out. Dissolve a pound each of salt and alum in two gallons of hot water, and put the skin into a tub sufficient to cover it; let it soak for twelve hours and hang it over a pole to drain. When well drained, stretch it carefully on a board to dry, and stretch several times while drying. Before it is quite dry, sprinkle on the flesh side one ounce each of finely pulverized alum and saltpeter, rubbing it in well. Try if the wool be firm on the skin; if not, let it remain a day or two, then rub again with alum; fold the flesh sides together and hang in the shade for two or three days, turning them over each day till quite dry. Scrape the flesh side with a blunt knife and rub it with pumice or rotten stone.

HOW TO CHOOSE A HOUSE IN RENTING

The choice of a house is in importance second only to the selection of a friend. The best residence is one which is not inconveniently distant from your place of business—is in a cheerful and healthy locality, and of which the rent, including rates, and taxes, does not exceed one-sixth of your income. Do not choose a neighborhood merely because it is fashionable, and carefully avoid occupying a dwelling in a locality of doubtful reputation. Be particular as to whether it is dry, with convenient sewage and plenty of water. A southern or western aspect is to be preferred. Should the house be infested with vermin avoid it. See that the windows and doors are well secured, that there are proper means of ventilation, and that the chimneys do not smoke. Let all needful repairs be made by the landlord before the completion of your agreement, otherwise you will probably be required to execute them at your own expense. Do not deal with a landlord who is commonly reputed as being disobliging, greedy, or litigious. In every case have a lease properly drawn out and stamped. Avoid the neighborhood of a sluggish stream, a mill-dam, or fresh-water lake. The penalties are rheumatism, ague, impaired eyesight, loss of appetite, asthma and other distressing ailments. Choose a house away from the vicinity of tan-yards, and tallow, soap, and chemical works. The neighborhood of old and crowded burial-grounds and of slaughterhouses is to be shunned. A low situation is perilous.

especially, during the prevalence of epidemics. Never lease a house in a narrow street, unless the back premises are open and extensive. Before closing your bargain try to obtain some account of the house from a former occupant.

CAUTION IN VISTING SICK-ROOM

Never venture into a sick-room in a violent perspiration (if circumstances require a continuance there for any time), for the moment the body becomes cold, it is in a state likely to absorb the infection, and receive the disease. Nor visit a sick person (especially if the complaint be of a contagious nature), with an empty stomach; as this disposes the system more readily to receive the infection. In attending a sick person, stand where the air passes from the door or window to the bed of the diseased, not betwixt the diseased person and any fire that is in the room, as heat of the fire will draw the infectious vapor in that direction, and much danger would arise from breathing in it. Do not enter the room the first thing in the morning before it has been aired; and when you come away, take some food, change your clothing immediately, and expose the latter to the air for some days.

HOW TO REMOVE GREASE FROM STONES, STEPS OR PASSAGES

Pour strong soda and water boiling hot over the spot, lay on it a little fuller's-earth made into a thin paste with boiling water, let it remain all night, and if the grease be not removed, repeat the process. Grease is sometimes taken out by rubbing the spot with a hard stone (not hearthstone), using sand and very hot water with soap and soda.

HOW TO MAKE CIDER VINEGAR

1. The most profitable return from such apples as are made into cider is the further transformation of the juice into vinegar. To do this, the barrels should be completely filled, so that all impurities that fermenting throws off, will be ejected through the bung-hole. This process should be completed before the barrel is put in the cellar, and when this is done, the purified juice should be drawn out of the original cask and put into others where there is a small amount of old vinegar, which will amazingly hasten the desired result. If no vinegar can be obtained to "start" the cider, it must remain in a dry cellar six months, and perhaps a year (the longer the better), before it will be fit for the table.

MOPPING AND CLEANING FLOORS

The practice of mopping floors too often, is a loss of time, and a waste of strength, and is as inconsistent with reason,as the habit of blacking cooking stoves every time they are used; and I am not sure but wet floors are as detrimental to health as the dust sent forth by the too frequent use of the common stove blacking. Mopping painted floors too often, and with hot soapsuds, wears off the paint, causing needless expense of both time and money. It is difficult to say, how often a painted, or an unpainted floor should be washed, for that depends on circumstances; but it requires that the cloth, mop and water should be as clean as a supply of the latter will admit, and the floor wiped as dry as possible; and that every corner, and other spots, under beds, bureaus, or any other article which may be in the apartments, should have a fair chance to partake of the cleansing.

HOW TO KEEP SILVER BRIGHT

For the preservation of luster of articles of silver or plated ware, when not needed for actual use for a considerable time, a coating of collodion (to be had at the drug store), may be employed to great advantage. The articles are to be heated, and the collodion then carefully applied by means of a brush, so as to cover the surface thoroughly and uniformly. It is used most conveniently when diluted with alcohol, as for photographic purposes. Articles thus prepared exhibit no trace whatever of their covering, and have stood for more than a year in shop windows and in dwellings, retaining their white luster and color, while other pieces not thus prepared became seriously tarnished.

HOW TO CLEAN KNIVES

1. Cut a good-sized solid, raw potato in two; dip the flat surface in powdered brick-dust, and rub the knife-blades. Stains and rust will disappear.—2. One of the best substances for cleaning knives and forks is charcoal, reduced to a fine powder, and applied in the same manner as brick-dust is used.—3. Water lime is also used for this purpose. Have a box with a partition and keep the lime in one part and the cloths in the other. Wet a small cloth a little and dip it in the lime, and after the articles are well washed and wiped, rub them until the spots are removed. Then take a larger, dry cloth, dip it in the lime, and rub the articles until polished to suit. Wipe off the dust from the knives and forks with a dry cloth, and they are ready to put away.

HOW TO TEST WATER

Mechanical impurities in water are removed only by filtration; chemical impurities cannot be removed in this manner. If lime is supposed to be present in water, the best test is to mix with it a small quantity of oxalic acid in a small vessel; lime, if present, will be revealed in a white precipitate. Carbonate of iron is best detected by the tincture of galls, which produces a black precipitate. If the penknife, dipped in water, assumes a yellowish coating, copper is present. The best method of detecting the presence of vegetable and animal matter is by dropping into it a small quantity of sulphuric acid; the water becomes black.

HOW TO MEND CHINA AND GLASSWARE

A useful cement is produced by powdered chalk and white of egg. A mixture of equal parts of white of egg, white lead, and glue forms a strong cement; or take a very thick solution of gum arabic in water, and stir into it plaster of Paris until the mixture becomes a viscous paste. Apply it with a brush to the fractured edges, and stick them together. In three days the article cannot again be broken in the same place.

CARE OF BEDS

The care of beds is not understood, even by some good housewives; when a bed is freshly made it often smells strong. Constant airing will, if the feathers are good, and only new, remove the scent. A bed in constant use should be invariably beaten and shaken up daily, to enable the feathers to renew their elasticity. It should lie, after it is shaken up, for two or three hours in a well-ventilated room. If the bed is in a room which cannot be spared so long, it should be put out to air two full days of the week. In airing beds the sun should not shise directly upon them. It is air, not heat, which they need. We have seen beds lying on a

roof where the direct and reflected rays of the sun had full force, and the feathers, without doubt, were stewing, and the oil in the quill becoming rancid, so that the bed smells worse after airing than before. Always air beds in the shade on cool and windy days. Featherbeds should be opened every three or four years, the tick washed, the seams soaped and waxed, and the feathers renovated. Feathers were never intended for human beings to sleep on. They are always without exception debilitating. Straw, corn husks, compressed sponge, or curled hair, should always be used in preference.

HOW TO CHOOSE CARPETS

The carpet ought to harmonize with the style of the paperhangings, but the quality of the material must depend on the capability of the purchaser's pocket. In carpets, as in many other things, the dearest articles are generally the cheapest in the end. In illustration of this we may state the carpet in our dining-room cost——a yard, and although it has been in daily use four years it looks as well as ever. For dining and drawing-rooms Brussels carpets are the best. If the room is small choose small patterns with few colors, or of a pattern formed of shades of the same color as the ground, such as a green carpet with mosses or small ferns in various shades of green, or a carpet with an indistinct pattern of ribbons or arabesques of a small size. When there is nothing very decided to attract the eye, the defects of wear are not so obvious. Stair carpets are also best of Brussels make; crimson wears longest; they must be of a pattern that will admit of being turned upside down, as it is a good plan frequently to change the position of the carpet, that the edge of each step may not always come in the same spot, which would soon wear the fabric. A small gay pattern of crimson or oak colors wears best; avoid blues or lilacs or shades of stone colors; the two former fade quickly, and the latter always looks dirty.

CHEAP ICE CREAM

Sweet milk, two quarts. Scald the milk, pour over four eggs, and stir well. Cool off and add sugar and essence of lemon or vanilla. Pour into a deep, narrow tin pail. Cover, and set into a wooden pail. Fill up the space between the two vessels with pounded ice and salt. In half an hour it will be fit to use. Keep thus in the ice till wanted.

HOW TO MAKE CIDER WITHOUT APPLES

To 8 gallons of soft water add 8 pounds of sugar, 7 oz. tartaric acid, one quart of yeast. Put the ingredients into a cask and stir it up; after twenty-four hours with the bung out, bung it up close; add one gallon of spirits, and let it stand forty-eight hours, after which time it is ready for use.

HOW TO KEEP MILK SWEET IN THE HOTTEST WEATHER

Put a spoonful of horse-radish in a pan of milk; this will keep it sweet for several days longer than without.

HOW TO MAKE YELLOW BUTTER IN WINTER

Put in the yolk of eggs before you finish churning. It has been kept a secret, but its value requires publicity.

ARTIFICIAL HONEY

Brown sugar 10 lbs., bee honey 2 lbs.; hot water 1 quart, and mix; then add strong infusion of slippery elm bark, one quart; cream tartar, half ounce.

HOW TO MAKE CANDLES FROM LARD

1. For twelve pounds of lard take one pound of saltpeter and one pound of alum; mix them and pulverize them; dissolve the saltpeter and alum in a gill of boiling water; pour the compound into the lard before it is quite all melted; stir the whole until it boils; skim off what rises; let it simmer until the water is boiled out, or until it ceases to throw off steam; pour off the lard as soon as it is done, and clean the boiler while it is hot. If the candles are to be run you may commence immediately; if to be dipped, let the lard cool to a cake, and then treat it as you would tallow.—2. To every eight pounds of lard, add one ounce nitric acid, and the manner of making is as follows: having carefully weighed your lard, place it over a small fire, or at least merely melt it; then add the acid, and mould the same as tallow, and have a clear, beautiful candle. In order to make them resemble bona fide tallow candles, you have only to add a small proportion of pure beeswax.

Miscellaneous Recipes, Hints and Money-making Wrinkles

A SALVE FOR CHAPPED HANDS AND LIPS

The following is a well tested, excellent remedy for chapped hands, and sores of this nature: Put together equal weights of fresh unsalted butter, mutton tallow, beeswax, and seeded raisins; simmer until the raisins are done to a crisp, but not burned. Strain and pour into cups to cool. Rub the hands thoroughly with it, and though they will smart at first, they will soon feel comfortable and heal quickly.

A CURE FOR STAMMERING

This silly and disagreeable habit, caused genrally by mimicking others, or of talking too rapidly, is best cured by speaking slowly, and taking great care to articulate every word distinctly, and without embarrassment or diffidence.

HOW TO MAKE LARGE NOSES SMALL

Dr. Cid, an inventive surgeon of Paris, noticed that elderly people, who for a long time have worn eyeglasses supported on the nose by a spring, are apt to have this organ long and thin. This he attributes to the compression which the spring exerts on the arteries by which the nose is nourished. The idea occurred to him that the hint could be made useful. Not long afterward, a young lady of fifteen years consulted him, to see if he could restore to moderate dimensions her nose, which was large, fleshy, and unsightly. The trait, he found, was hereditary in her family, as her mother and sister were similary afflicted. This was discouraging, as hereditary peculiarities are particularly obstinate. But the doctor determined to try his method; he took exact measurements, and had constructed for her a "lunette pince-nez"—a spring and pad for compressing the artery —which she wore at night and whenever she could conveniently in daytime. In three weeks a consolatory diminution was evident, and in three months the young lady was quite satisfied with the improvement in her features.

HOW TO MAKE A HAIR DYE

Take one drachm of nitrate of silver, and add to it just sufficient rain water to dissolve it, and no more; then take strong spirit of ammonia, and gradually pour on the solution of silver, until it becomes as clear as water. (the addition of the ammonia at first makes it brown); then wrap round the bottle two or three covers of blue paper, to exclude the light—otherwise it will spoil. Having made this, obtain two drachms of gallic acid; put this into another bottle which will contain one-half pint; pour upon it hot water, and let it stand until cold—when it is fit for use.

HOW TO DYE THE HAIR

First wash the hair with soap and water; afterwards with clean water. Dry, and apply the gallic acid solution, with a clean brush. When it is almost dry, take a small tooth comb, and with a fine brush, put on the teeth of the comb a little of the silver solution, and comb it through the hair, when it will become a brilliant jet black. Wait a few hours; then wash the head again with clean water. If you want to make a brown dye, add double or treble the quantity of water to the silver solution, and you can obtain any shade of color you choose.

A CURE FOR DEAFNESS

To cure deafness, take a quarter of an ounce of shark's oil, ten drops of laudanum, and five drops of turpentine, mix. Put three drops in each ear every morning, and insert soft wool, so as to keep out the cold.

A CURE FOR TOOTHACHE

Take alum reduced to an impalpable powder, two drachms, nitreous spirits of ether, seven drachms, mix and apply to the tooth.

A CURE FOR CORNS AND WARTS

Galvanum, one ounce, pitch one-half ounce, litharge plaster two drachms; melt and add verdigris and muriate of ammonia, each one ounce; and apply over the corn or wart with a strip of leather.

A CURE FOR SLEEPLESSNESS

Go without supper. If accustomed to drink tea, take none in the latter part of the day, and gradually leave it off altogether. Spend some hours of the afternoon in the open air; avoid everything calculated to excite the mind in the latter part of the day, sedulously putting away all thought and talk about business; seek cheerful, but not boisterous sociability—that which is sedative rather than that which is exciting: have the sleeping room well ventilated; avoid sleeping on feathers; at night lay off all garments worn during the day and put on fresh ones: sleep alone; and getting into bed take a comfortable position and determinedly keep it till sleep comes, compelling yourself to avoid tossing and tumbling, and fidgeting about. Learn to control your mental activities; when you get to bed stop thinking; if your thoughts begin to wander in any direction, bring them back and hold them steadily to a fixed point. Keep this up till you become master of your thoughts. Then in all directions seek to bring the entire system under the control of the laws of life and health, and be patient. Sleeplessness is a thing not to be overcome in a day, any more than rheumatism or bronchitis. If you find yourself inclined to wake up at a regular hour in the night and remain awake, you can break up the habit in three days, by getting up as soon as you wake, and not going to sleep again until your usual hour for retiring; or retire two hours later, and rise two hours earlier, for three days in succession not sleeping a moment in the daytime. Nervous persons, who are troubled with wakefulness and excitability, usually have a strong tendency of blood to the brain, with cold extremities. The pressure of the blood on the brain keeps it in a stimulant or wakeful state, and the pulsations in the head are often painful. Let such rise, and chafe the body and extremities with a brush or towel, or rub smartly with the hands to promote circulation and withdraw the excessive amount of blood from the brain, and they will fall asleep in a few moments. A cold bath, or a sponge bath and rubbing, or a good run, or a rapid walk in the open air, or going up and down stairs a few times just before retiring, will aid in equalizing circulation and promoting sleep.

HOW TO ASCERTAIN THE STATE OF THE LUNGS

Persons desirous of ascertaining the true state of their lungs, are directed to draw in as much breath as they conveniently can; they are then to count as far as they are able, in a slow and audible voice without drawing in more breath. The number of seconds they can continue counting must be carefully observed; in a consumptive the time does not exceed ten, and is frequently less than six seconds; in pleurisy and pneumonia it ranges from nine to four seconds. When the lungs are in a sound condition, the time will range as high as from twenty to thirty-five seconds.

HOW TO MAKE MAGIC PHOTOGRAPHS

Take, in the first place, an ordinary print —a card-picture, for instance—on albumen paper; beneath the negative in the usual way, and, when sufficiently printed, let it be carefully washed in the dark room, so as to remove all the free nitrate of silver, etc. Now immerse it in the following solution, also in the dark room: saturated solution bichloride of mercury (corrosive sublimate), one ounce; hydrochloric acid, one drachm. The saturated solution is previously prepared by putting into water more bichloride of mercury than it will dissolve by shaking in about twelve hours. The print will gradually be bleached in this liquid, in the ordinary meaning of the word—that is, it will disappear; but the fact is, the print is still there—its color alone is changed, a double salt having been formed of mercury and silver, which is white, as many of our readers, who have been in the habit of intensifying with a mercurial salt, are aware. As soon as the print has quite disappeared, the paper is thoroughly washed and dried in the dark room; it is also preserved between folds of orange-colored paper, in order to keep it from the action of light, for the surface is still in some measure sensitive to light. The bleaching of the print—that is, its conversion into a white salt—is effected more quickly by keeping it in motion in the mercurial solution. As we said before, the print has not been bleached in reality—the substance which originally formed it is still there, together with a new substance, a salt of mercury. But the two salts of silver and mercury may be easily brought out and made visible by several solutions, such as sulphide of ammonium, solution of hydrosulphuric acid; in fact, any of the soluble sulphides, ammonia and hposulphite of soda. The latter salt is used in preference to the others. Small pieces of

blotting-paper, therefore, of the same size as the prints are cut out and steeped in a saturated solution of hyposulphite of soda and then dried. The magic photographs are packed, as before stated, between folds of orange-colored paper; the papers dipped in hyposulphite of soda are the developers, and may be packed between two sheets of common writing-paper. The development of the image is effected in the following manner: place the albumen paper which contains the whitened print on a pane of glass, print side upward, on this lay the dry piece of blotting-paper that has been previously dipped in hyposulphite of soda. Moisten the latter thoroughly, then place over it a pane of glass, and upon this a weight to bring the two pieces of paper into intimate contact. In a very short time the picture will appear in all its original detail, and of a sepia tone.

HOW TO MAKE TRANSPARENT SOAP

Slice 6 lbs. nice yellow bar-soap into shavings; put into a brass, tin or copper kettle, with alcohol, ½ gal., heating gradually over a slow fire, stirring till all is dissolved; then add 1 oz. sassafras essence, and stir until all is mixed; now pour into pans about 1½ inches deep, and when cold cut into square bars the length or width of the pan, as desired.

HOW TO MAKE ENGLISH BAR SOAP

Six gals. soft water; 6 lbs. good stone lime; 20 lbs. sal soda; 4 oz. borax; 15 lbs. fat (tallow is best); 10 lbs. pulverized resin, and 4 oz. beeswax; put the water in a kettle on the fire, and when nearly boiling add the lime and soda; when these are dissolved, add the borax; boil gently, and stir until all is dissolved; then add the fat, resin and beeswax; boil all gently until it shows flaky on the stick, then pour into moulds.

HOW TO BLEACH FEATHERS

Place the feathers from 3 to 4 hours in a tepid dilute solution of bi-chromate of patassa, to which, cautiously, some nitric acid has been added (a small quantity only). To remove a greenish hue induced by this solution, place them in a dilute solution of sulphuric acid, in water, whereby the feathers become perfectly white and bleached.

HOW TO EXTRACT OIL SPOTS FROM FINISHED GOODS

Saturate the spot with benzine, then place two pieces of very soft blotting paper under and two upon it, press well with a hot iron, and the grease will be absorbed.

HOW TO PRESERVE GOODS AND CLOTHING FROM MILDEW

Alum, 2 lbs., dissolved in 60 lbs. water; blue vitriol, 2 lbs., dissolved in 8 lbs. of water, to which is added gelatine, 1 lb., dissolved in 30 lbs. of water; acetate of lead, ½ lb., dissolved in 30 pounds of water. The solutions are all hot, and separately mixed, with the exception of the vitriol, which is added.

HOW TO TAKE IMPRESSIONS FROM COINS

Make a thick solution of isinglass in water, and lay it hot on the metal; let it remain for twelve hours, then remove it, breathe on it and apply gold or silver-leaf on the wrong side. Any color may be given to the isinglass instead of gold or silver, by simple mixture.

HOW TO PRINT PICTURES FROM THE PRINT ITSELF

The page or print is soaked in a solution first of potass, and then of tartaric acid. This produces a perfect diffusion of crystals of bitartrate of potass through the texture of the unprinted part of the paper. As the salt resists oil, the ink roller may now be passed over the surface, without transferring any of its contents, except to the printed paper.

HOW TO MAKE SPANISH SNUFF

Spanish snuff is made from unsifted Havana snuff, reduced by adding ground Spanish nutshells, sprinkling the mixture with treacle water, and allowing it to sweat for some days before packing.

SYMPATHETIC OR SECRET INK

Mix equal quantities of sulphate of copper and sal ammonia, and dissolve in water. Writing done with this ink is invisible until the paper is heated, when it turns a yellow color.

HOW TO MAKE CIRCASSIAN CURLING FLUID

Into a pint of pure olive oil melt slowly a piece of beeswax about the size of a walnut; after which add a quarter of an ounce of oil of rosemary and a quarter of an ounce of oil of orriganum.

The hair can also be curled by rubbing it with the yolk of an egg, washing off afterwards with clear water.

HOW TO MAKE COLOGNE WATER

One gallon of alcohol, half an ounce oil of bergamot, one ounce lavender, one ounce lemon, half an ounce tincture musk, half an ounce oil of orange, and a little ottar of roses.

HOW TO TAKE GREASE FROM CLOTHS

Put a little powdered French chalk on the spot, cover with porous paper, and apply a hot flat-iron.

HOW TO TAKE FACSIMILES OF SIGNATURES

Write your name on a piece of paper, and while the ink is wet sprinkle over it some finely-powdered gum arabic, then make a rim round it and pour on it some fusible alloy, in a liquid state. Impressions may be taken from the plates formed in this way, by means of printing-ink and the copperplate-press.

HOW TO OBTAIN FRESH FLOWERS IN WINTER

Choose some of the most perfect buds of the flowers you would preserve, such as are latest in blowing and ready to open; cut them off with a pair of scissors, leaving to each, if possible, a piece of stem about three inches long; cover the end of the stem immediately with sealing wax, and when the buds are a little shrunk and wrinkled, wrap each of them up separately in a piece of paper perfectly clean and dry, and lock them up in a dry box or drawer; and they will keep without corrupting. In winter, or at any time when you would have the flower blow, take the buds at night and cut off the end of the stem sealed with wax, and put the buds into water wherein a little nitre or salt has been diffused, and the next day you will have the pleasure of seeing the buds open and expanding themselves, and the flowers display their most lively colors and breathe their agreeable odors.

A SIMPLE METHOD FOR COPYING DRAWINGS

Silvered albumen paper, after being washed, may be conveniently used for copying negatives as well as positives. It keeps for weeks, and becomes sensitive to light only after exposure to the vapors of aqua ammonia, technically termed "smoking with ammonia." Dr. H. Vogel has greatly simplified the latter process by substituting for the liquid ammonia the powder of carbonate of ammonia. He thoroughly impregnates a piece of felt or cloth with this powder, and lays it under the silvered sheet, separated from it by a piece of blotting-paper. The negative is placed on the top and the back covered, and the whole is ready for the copying frame. One impregnation with the carbonate of ammonia serves for several copies. So very simple is the operation that Dr. Vogel has made use of it in public libraries for copying complicated drawings. He places the silvered paper, with the substratum of carbonate of ammonia and the drawing on top, between two plates of glass, and, exposing it to the light of the window, obtains a copy quite distinct in all its details, while he himself may be occupied with reading or otherwise. The copy obtained is, of course, in white lines upon black ground. Such photographs merely require to be treated with soda when intended for long preservation. They are generally, however, not designed to be kept a great while.

CEMENT FOR ATTACHING METAL TO GLASS

Take two ounces of a thick solution of glue, and mix it with one ounce of linseed-oil varnish, and half an ounce of pure turpentine: the whole are then boiled together in a close vessel. The two bodies should be clamped and held together for about two days after they are united, to allow the cement to become dry. The clamps may then be removed.

AN AMALGAM FOR MIRRORS

Lead and tin, each 1 oz.; bismuth, 2 oz.; mercury, 4 oz.; melt as before, and add the mercury. There are used to silver mirrors, glass globes, etc., by warning the glass, melting the amalgam, and applying it.

HOW TO MAKE WAX FLOWERS

The following articles will be required to commence wax work: 2 lbs. white wax, ¼ lb. hair wire, 1 bottle carmine, 1 ultramarine blue, 1 bottle chrome yellow, 2 bottles chrome green, No. 1; 2 bottles chrome green, No. 2; 1 bottle rose pink, 1 bottle royal purple, 1 bottle scarlet powder, 1 bottle balsam fir, 2 dozen sheets white wax. This will do to begin with. Now have a clean tin dish and pour therein a quart or two of water: then put in about 1 lb. of the white wax and let it boil; when cool enough, so the bubbles will not form on top, it is ready to sheet, which is done as follows:—Take half of a window pane, 7x9, and, after having washed it clean, dip into a dish containing weak soapsuds; then dip into the wax and draw out steadily and plunge it into the suds, when the sheet will readily come off. Lay it on a cloth or clean paper to dry. Proceed in like manner until you have enough of the white: then add enough of the green powder to make a bright color, and heat and stir thoroughly until the color is evenly distributed; then proceed as for sheeting white wax. The other colors are rubbed into the leaves after they are cut out, rubbing light or heavy according to shade.

For patterns you can use any natural leaf, forming the creases in wax with the thumb nail or a needle; to put the flowers together or the leaves on to the stem, hold in the hand until warm enough to stick. If the sheeted wax is to be used in summer, put in a little balsam of fir to make it hard. If for winter, none will be required.

You can make many flowers without a teacher: but one to assist, in the commencement, would be a great help; though the most particular thing about it is to get the wax sheeted. The materials I have suggested can be procured at any drug store, and will cost from $3 to $4.50.

HOW TO COVER BRASS WITH BEAUTIFUL LUSTER COLORS

One ounce of cream of tartar is dissolved in one quart of hot water, to which is added half an ounce of tin salt (protochloride of tin) dissolved in four ounces of cold water. The whole is then heated to boiling, the clear solution decanted from a trifling precipitate, and poured under continual stirring into a solution of three ounces hyposulphite of soda in one-half a pint of water, whereupon it is again heated to boiling, and filtered from the separated sulphur. This solution produces on brass the various luster-colors, depending on the length of time during which the articles are allowed to remain in it. The colors at first will be light to dark, gold yellow, passing through all the tints of red to an irridescent brown. A similar series of colors is produced by sulphide of copper and lead, which, however, are not remarkable for their stability; whether this defect will be obviated by the use of tin solution, experience and time alone can show.

HOW TO MAKE A CANDLE BURN ALL NIGHT

To make a candle burn all night, when, as in the case of sickness, a dull light is wished, put finely powdered salt on the candle till it reaches the black part of the wick. In this way a mild and steady light may be kept through the night by a small piece of candle.

HOW TO MAKE EGGS OF PHARAOH'S SERPENTS

Take mercury and dissolve it in moderately dilute nitric acid by means of heat, taking care, however, that there be always an excess of metallic mercury remaining; decant the solution and pour it into a solution of sulpho-cyanide of ammonium or potassium, which may be bought at a good drug store, or of a dealer in chemicals. Equal weights of both will answer. A precipitate will fall to the bottom of the beaker or jar, which is to be collected on a filter and washed two or three times with water, when it is put in a warm place to dry. Take for every pound of this material one ounce of gum tragacanth which has been soaked in hot water. When the gum is completely softened it is to be transferred to a mortar, and the pulverized and dried precipitate gradually mixed with it by means of a little water, so as to present a somewhat dry pill mass, from which by hand, pellets of the desired size are formed, put on a piece of glass, and dried again; they are then ready for use.

HOW TO MAKE WHITEWASH

1. A fine brilliant wash is obtained by mixing "Paris white" with glue, in the proportion of sixteen pounds to half a pound of glue. The glue should be the white, transparent kind. It should be covered with cold water at night, and in the morning carefully heated until dissolved. The Paris white should be stirred into hot water until it is of the proper milky consistency for applying to the walls, and the dissolved glue added and thoroughly mixed. This recipe is considered one of the best, and has the merit of being inexpensive. 2. The following is sent out by the Light-house Board of the Treasury Department: "The following recipe for whitewashing has been found by experience to answer on wood, brick, and stone, nearly as well as oil paint, and is much cheaper: Slack half a bushel of unslacked lime with boiling water, keeping it covered during the process. Strain it and add a peck of salt, dissolved in warm water; three pounds of ground rice put in boiling water, and boiled to a thin paste; half a pound of powdered Spanish whiting, and a pound of clear glue, dissolved in warm water: mix this well together and let the mixture stand for several days. Keep the wash thus prepared in a kettle or portable furnace, and when used put it on as hot as possible, with painter's or whitewash brushes." 3. Take a clean, water-tight cask and put into it half a bushel of lime. Slack it by pouring water over it boiling hot, and in sufficient quantity to cover it five inches deep, and stir it briskly till thoroughly slackened. When the lime has been slackened, dissolve it in water, and add two pounds of sulphate of zinc and one of common salt. These will cause the wash to harden and prevent its cracking which gives an unseemly appearance to the work. A beautiful cream color may be given to the wash by adding three pounds of yellow ochre; or a good pearl or lead color, by the addition of lamp or iron black. For fawn color add four pounds of umber, one pound of Indian red, and one pound of common black. For stone color add four pounds raw umber and two pounds lamp black. When applied to the outside of houses and to fences, it is rendered more durable by adding about a pint of sweet milk to a gallon of wash.

How To Perform The Davenport Brothers' "Spirit Mysteries"

The "manifestations" of the Davenport Brothers are produced in either a cabinet or a darkened room, and in no instance while the operators are in full view of the audience.

In a darkened room their "manifestations" mostly consist of the thrumming (without music) of guitars, ringing the bells, rattling of tambourines, etc., while at the same time the instruments are moved—as indicated by the sounds from them—with considerable rapidity about the room. The same sounds and movements also occur to a limited extent after the operators have been bound by a committee from the audience, the reintroduction of light disclosing them still in bonds as placed by the committee. They usually extricate themselves from the tying after the light is again extinguished, in less time than the committee occupied in binding them. During their entertainment they are also bound with ropes by what they assume to be a spirit power, without mortal assistance. To all appearance the tying done by "the spirits" is as methodical and secure as any that a mortal could do. Yet the very instant that darkness supervenes, after the knots have been examined by the committee, the musical instruments are sounded, and various "manifestations" made that could not possibly be accomplished without the use of hands; immediately on the cessation of which light is produced, and the "mediums" are ascertained to be bound as they were before the extinction of the light. Sometimes, while he is thus situated, one of the mediums will have his coat removed from his body in a few seconds' time.

A performance of the Davenports, which many spiritualists have asserted to be an indubitable evidence of the exercise of spirit power, is as follows: One of them sits with his right side to the table on which the instruments are lying. The other takes a seat beside, and at the left of the one at the table. An investigator sits in front of the mediums, and puts a hand on the head of each; and, reaching up, each medium puts his hands, in separate places, but close together, on an arm of the investigator. The light is extinguished, and sounds are made on the instruments, the latter being moved, and perhaps brought in contact with the investigator's head. That gentleman is not conscious of any change in the position of the mediums. Their hands seem to him to remain constantly clasped to his arms, in which position they are found to be when the light is again produced.

The mysterious cabinet in which the Davenports give their public exhibitions is about six feet high, six feet wide, and two and a half feet deep, the front consisting of three doors opening outward. In each end is a seat with holes through which the ropes can be passed in securing the performers. In the upper part of the middle door is a lozenge-shaped aperture, curtained on the inside with black muslin or oil cloth. The bolts are on the inside of the door.

As preliminary to the "manifestations," and in order that it may not be supposed that they are the operators, the mediums submit to being bound by a committee from the audience. The doors are then closed and bolted, it being necessary for the mortal manager to reach through the aperture to secure the middle door. A tremendous racket is soon made in the cabinet, the noise of the musical instruments being combined with a general whang banging; and sometimes people in the audience think they can distinguish the sound of a cloven hoof kicking things around inside the structure which encloses the mediums.

Usually, after the first performance, the doors of the cabinet are opened, and the committee requested to observe that the operators are still bound; but sometimes there is an interval just before the opening of the door, in which a rattling of the ropes is heard, and then the mediums walk forth, free. If they are observed by the committee before the ropes are removed from them, the doors are again closed till the untying is accomplished.

Being again enclosed in the cabinet, the young men are bound by what they assert to be a spirit power, during the exercise of which they are passive. The "spirit tying" is submitted for examination to the committee, by whom it is pronounced to be apparently so secure as to preclude the possibility of the mediums being able to use their hands. No sooner are the doors closed, however, than hands are seen at the aperture in the middle door. These hands are visible for but an instant at a time, and with a rapid vibratory movement while in view, so that it would not be possible for the observer to identify them as belonging to the mediums, however positively he might believe them to be theirs.

Immediately on the disappearance of the hands from the aperture, the cabinet doors are opened, and the committee, after an examination, report the mediums to be still bound. The doors are again closed, and instantly "the spirits" strike up a lively tune on a violin, with a bell and tambourine accompaniment.

That the audience may be still more profoundly impressed with the wonderful powers of the young men, they sometimes request that flour be placed in their hands, as a security, in addition to the "spirit tying," against their being able to use those members. Their request being complied with, a hand or two is shown at the aperture, some noises are made on the musical instruments, and then the mediums exhibit the flour still in their hands, with none spilled on their clothing or the floor.

Sometimes they permit one of the committee to sit in the cabinet with them, for a short time, while they are bound, but he, too, must be bound, with his right hand secured to one medium's shoulder, and his left hand to the other medium's knees. The lights in the hall are then turned down so that it is quite dark in the cabinet. The gentleman in contact with the mediums is banged over the head with an instrument of music, his hair is pulled, his nose tweaked, and altogether he is "pretty considerably mussed up." Being released from the not very pleasant position, and perhaps looking somewhat scared, he reports to the audience what has been done to him, with the additional statement that he did not detect any movement on the part of the mediums. "If not the manifestation of spirit power, what is it?" is a question which very naturally arises in the minds of those present. An answer is contained in the following explanations:

In a darkened room, the investigators being seated by the walls, the mediums grasp

the guitars by the neck, next the keys, and swing them around, and thrust them into different parts of the open space of the room, at the same time vibrating the strings of the instruments with the forefinger. The faster the finger passes over the strings, the more rapidly the instrument seems to move. Two hands can thus use as many guitars, and a tea-bell, clasped by the little finger of either hand, can be rung at the same time. Or one performer can sound a guitar and bell with one hand, and play an accordion or concertina with the other, an end of the last named instrument being held under the arm against the body. In the darkness the audience thinks the instruments go furthur than they really do; and the room being close, the sounds are echoed or reflected from the walls.

When an investigator is sitting with the mediums at a table whereon musical instruments are lying, his hands resting on their heads, and their hands clasped to his arm above the elbow, the medium next the table removes one hand from the arm without being detected, simply because the presence of the other hand, which is nearer the shoulder, is so great as to cut off communication by means of the nerves of sensation from the arm below. It is thus impossible for the investigator to determine whether both hands of the medium are on his arm or not. He thinks they are, because the sensation in his arm remains the same. In the first place, the left hand of the medium is put heavily on the arm next the shoulder, and the right hand quite lightly, close by the other next the elbow. Both hands are seen to be on the arm, and are presumed to be pressing with equal force. The light is extinguished, and perhaps the medium takes the man's attention momentarily from his arm, by suggesting that their feet be placed in contact; then it is that with a gradually increased pressure of his left hand the medium carefully removes his right hand, and while he preserves a rigidity of the muscles of his neck and back, so as not to move his head, he takes the guitar (which lies within reach) by the neck, and extending the body of the instrument as far as possible, moves it in a half-circle, vibrating the strings with his fore-finger. That the demonstration may be more striking, perhaps he hits the guitar against the head of the man with whom he is in contact. If he wishes to ring a bell at the same time, he can hold it with his little finger. He can sound, in turn, all the instruments lying on the table; then, carefully replacing his hand on the man's arm, he is ready to have a light produced. The other medium really holds on with both hands to the arm he has clasped, feeling sure that while he does so it cannot be interfering with the operations of "the spirits" at the table.

Should the medium put his right hand on top of the extended thumb of his left hand, with an appearance, to the investigator, of both hands being on his arm, the same results could be produced with less risk of detection; for the presence of the thumb, where the right hand was seen to be, would lead the investigator to suppose, in the darkness, that the hand was still there.

If in their dark seance, phosphorus having been put on the instruments, you should see a phosphoresent light very far above the stage, you may take it that the instrument which is **heard** is **not** where the light is seen, but that the phosphorus has been rubbed from the instruments, and some other put on a piece of card-board, which is attached to a folding rod and elevated in the darkness, to the desired position.

To the Davenports, the extrication of themselves, after being bound by a committee, is a brief and easy task. A simple "twist of the wrist" will convert a "square knot," usually considered the most secure, into two "half-hitches," through which the part of the rope they enclose can be easily slipped. With a little slack in the rope any ordinary knot can be made into a "slip-knot." It is hardly possible to bind a man without causing him pain, so that he cannot get a "slack" in the rope. The writer has been bound with ropes a great many times by people who were determined to make a "good job" of the tying, and not once has he failed to release himself, often in less time than was occupied in binding him.

After the Davenports have been bound in their cabinets by a committee, and the doors of the structure are closed, they immediately set to work to loosen the knots next their wrists and extricate their hands, which they usually succeed in doing in a short space of time. In some instances one of them will have a hand at liberty as soon as the middle door is bolted, which he exhibits at the aperture, to be followed shortly by other hands; then both the mediums do their "level best" in making a noise with such instruments as they have at hand. Speedily getting their hands back in the ropes and drawing the knots close to their wrists, they make some additional noise with one or two instruments which they had so placed as to be still within their reach, and then give a signal for the opening of the doors. The knots are examined by the committee and reported to be "the same as they were;" the doors are again closed and the operatives release themselves entirely from the ropes, untying every knot.

Sometimes, after being tied by the committee, the mediums cannot readily extricate their hands and get them back as they were, in which case they do not have the doors open till all the knots are untied, it being a better policy for them to wait till "the spirits" have tied them before making a show of hands or torturing the musical instruments.

The important point with the Davenports, in tying themselves, is to have a knot next their wrists that looks solid, "fair and square," but which at the same time will admit of being slipped, so that they can get their hands out in a moment. There are several ways in which such a knot can be formed, one of which is as follows: A square knot is loosely tied in the middle of a rope, then the ends of the rope are tucked through, in opposite directions, below the knot, and the latter is then drawn tight. There are then two loops, which are left just large enough for the passage of the hand through them. The ends of the rope are then put through the holes in the seat, and tied beneath, and also to the feet. Lastly the hands are put through the loops, and the knot drawn close to the wrist, coming between the latter. No novice in tying would suspect from the appearance of such a knot, and without taking particular pains in tracing the direction of the rope in forming it, that it could be slipped. As the hands of the mediums when thus tied are at their backs, close to the end of the cabinet, the committee cannot have a very good opporunity to observe the most important knot.

The doors next the ends of the cabinet are first closed by the manager, and as the mediums are then concealed from view of the audience, they strain open the loops and are ready to use their hands as soon as the middle door is closed, which one of them instantly bolts

on the inside. Then their hands are thrust under the curtain, which hangs over the aperture in the door, and exhibited to the audience; but as, before stated, the hands are exhibited but for an instant at a time, and with a vibratory motion of them; otherwise they might be recognized as belonging to the mediums. To make the hands look large or small, they spread or press together the fingers. With that peculiar motion imparted to them, four hands at the aperture will appear to be half a dozen, or more, as two pennies, rubbed together between the balls of a person's thumbs, will present what appear to be the edges of three.

A lady's flesh-colored kid glove, nicely stuffed with cotton, has sometimes been exhibited as the hand of a female spirit—a critical observation of it not being allowed.

These mediums once exhibited what they doubtless supposed would look like the hand of a negro; but it was of uniform blackness, palm and all. At one of their entertainments, when, in addition to the exhibition of "spirit hands," a naked arm was protruded from the aperture an old lady, who, on account of the dimness of her vision, was permitted to stand close by the cabinet, saw, notwithstanding her defective sight, what made her exclaim, "Well, I declare! They must practice vaccination in the other world, for I see marks of it on that spirit arm!" When the "spirit arm" was shown at another time, rope marks were seen on the wrist!

It takes these mediums but a few seconds to get their hands back into loops, and draw the knots close to their wrists, ready to be examined by the committee.

In making the music, one medium holds the violin in the manner usual with most players of that instrument, and with the little finger of the bow hand he clasps a bell, which rings in time with the music. The other medium beats the tambourine on his head or knees with one hand, while his other hand is engaged in making a noise on something else.

The performances of these young men are interesting on account of the ingenuity and expertness exercised by them, and would not be in the least objectionable were it not for their pretended "mediumship."

Electrical Psychology

The most easy, sure and direct mode to produce electro psychological communication is to take the individual by the hand, in the same manner as though you were going to shake hands. Press your thumb with moderate force upon the **ulnar nerve**, which spreads its branches to the ring and little finger. The pressure should be nearly an inch above the knuckle, and in range of the ring finger. Lay the ball of the thumb flat and particularly crosswise so as to cover the minute branches of this nerve of motion and sensation. When you first take him by the hand, request him to place his eyes upon yours, and to keep them fixed, so that he may see every emotion of your mind expressed in the countenance. Continue this pressure for a half a minute or more. Then request him to close his eyes, and with your fingers gently brush downward several times over the eyelids, as though fastening them firmly together. Throughout the whole process feel within yourself a fixed determination to close them, so as to express that determination fully in your countenance and manner. Having done this, place your hand on the top of his head and press your thumb firmly on the organ of Individuality, bearing partially downward, and with the other thumb still pressing the ulnar nerve, tell him—**you can not open your eyes!** Remember, that your manner, your expression of countenance, your motions and your language must all be of the most positive character. If he succeed in opening his eyes, try it once or twice more, because impressions, whether physical or mental, continue to deepen by repetition. In case, however, that you cannot close his eyes, nor see any effect produced upon them, you should cease making any further efforts, because you have now fairly tested that his mind and body both stand in positive relation as it regards the doctrine of impressions. If you succeed in closing the subject's eyes by the above mode, you may then request him to put his hands on his head, or in any position you choose, and tell him, **you can not stir them!** In case you succeed, request him to be seated, and tell him, **you can not rise!** If you are successful in this, request him to put his hands in motion, and tell him, **you can not stop them!** If you succeed, request him to walk the floor, and tell him, **you can not cease walking!** And so you may continue to perform experiments involving muscular motion and paralysis of any kind that may occur to the mind, till you can completely control him, in arresting or moving all the voluntary parts of his system.

How To Make Persons At A Distance Think Of You

Let it be particularly remembered that "Faith" and concentration of thought are positively needful to accomplish aught in drawing others to you or making them think of you. If you have not the capacity or understanding how to operate an electric telegraph battery, it is no proof that an expert and competent person should fail doing so; just so in this case; if faith, meditation, or concentration of thought fail you, then will you also fail to operate upon others. First, you must have a yearning for the person you wish to make think of you; and secondly, you must learn to guess at what time of day or night he may be unemployed, passive, so that he be in a proper state to receive the thought which you dispatch to him. If he should be occupied in any way, so that his nervous forces were needed to complete his task, his "Human Battery," or thought, would not be in a recipient or passive condition, therefore your experiment would fail at that moment. Or if he were under heavy narcotics, liquors, tobacco, or gluttonous influences, he could not be reached at such moments. Or, if he were asleep, and you operated to affect a wakeful mind or thought, you would fail again at the moment. To make a person at a distance think of you, whether you are acquainted with him or not, matters not; I again repeat, find out or guess at what moment he is likely to be passive; by this I mean easy and careless; then, with the most fervent prayer, or yearning of your entire heart, mind, soul, and strength, desire he may think of you; and if you wish him to think on any particular topic in relation to you, it is necessary for you to press your hands, when operating on him, on such mental faculties of your head as you wish him to exercise towards you. This demands a meagre knowledge of Phrenology. His "Feeling Nature" or "Propensities," you cannot reach through these operations, but when he once thinks of you, (if he does not know you he imagines such a

being as you are), he can easily afterwards be controlled by you, and he will feel disposed to go in the direction where you are, if circumstances permit, and he is his own master, for, circumstances alter cases. I said you cannot reach his "Feeling," but only his "Thinking Nature," truly, but after he thinks of you once, his "Feeling Nature" or propensities, may become aroused through his own organization. In conclusion on this topic, let me say, that if you wish the person simply to think of you, one operation may answer; but on the contrary, if you wish him to meet you, or go where you are, all you have to do is to persevere in a lawful and Christian manner to operate, and I assure you, in the course of all natural things, that is if no accident or very unfavorable circumstances occur, he will make his way towards you, and when he comes within sight, or reaching distance of you, it will be easy to manage him.

How To Charm Those Whom You Meet And Love

When you desire to make any one "Love" you with whom you meet, although not personally acquainted with him, you can very readily reach him and make his acquaintance, if you observe the foregoing instructions, in addition to the following directions: Suppose you see him coming towards you in an unoccupied mood, or he is recklessly, or passively walking past you, all that remains for you to do at that moment is to concentrate your thought and send it into him as before explained and, to your astonishment, if he was passive, he will look at you, and now is your time to send a thrill to his heart, by looking him carelessly, though determinedly, into his eyes, and praying with all your heart, mind, soul and strength, that he may read your thought, and receive your true Love, which God designs we should bear one another. This accomplished, and you need not and must not wait for a cold-hearted, fashionable, and popular Christian introduction; neither should you hastily run into his arms, but continue operating in this psychological manner; not losing any convenient opportunity to meet him at an appropriate place, when an unembarrassed exchange of words will open the door, to the one so magnetized. At this interview, unless prudence sanction it, do not shake hands, but let your manners and loving eyes speak with Christian charity and ease; wherever, or whenever you meet again, at the first opportunity grasp his hand, in an earnest, sincere, and affectionate manner, observing at the same time, the following important directions, viz.:—As you take his bare hand in yours, press your thumb gently, though firmly, between the bones of the thumb and forefinger of his hand, and at the very instant when you press thus on the blood vessels, (which you can before ascertain to pulsate,) look him earnestly and lovingly, though not pertly nor fiercely, into his eyes, and send all your heart's, mind's, and soul's strength into his organization, and he will be your friend, and if you find him not to be congenial, you have him in your power, and by carefully guarding against evil influences, you can reform him to suit your own purified, Christian, and loving taste.

Writing On The Arm

The conjuror's explanation was a great lesson in "spiritualism." I next asked him to elucidate the trick of writing on the arm. On the occasion of my visit to Mr. Forster, when the raps indicated the second pellet, he required the "spirit" present to write the initials on his bare arm. Mr. Forster placed his arm under the table for a moment, then rested it in front of a lamp burning on the table, and quickly rolled up the sleeve of his coat. The skin was without stain or mark. He passed his hand over it once or twice, and the initials of the names I had written on the second pellet seemed to grow on the arm in letters of crimson. "It's a trick I do every night. It goes with the audience like steam," said the conjuror. "Very simple. Well, suppose a name. What name would you like?" "Henry Clay," I replied. Down went the conjuror's arm under the table. In a few seconds he raised it and exposed the bare forearm without mark upon it. He doubled up his fist tightly so as to bring the muscles of the arm to the surface, and rubbed the skin smartly with his open hand. The letters "H. C." soon appeared upon it in well-defined writing of a deep red color. "There you have it, gentlemen; that's the blood-red writing. Very simple. All you have to do is to take a lucifer-match, and write on your arm with the wrong end of it. If you moisten the skin with a little salt water first, all the better. Then wet the palm of the other hand, rub your arm with it. Send up the muscles and the blood-red writing will come out. It will fade away in less than no time. If you look under the table, you will see that I have a little piece of pointed wood. I can move my arm under that and write the letters without using the other hand. But that's a trick which wants practice.

HYPNOTISM

MAGNETIC HEALING & PERSONAL MAGNETISM.

Hypnotizing by the Fascination Method

The wonderful psychical phenomena embraced under the names of hypnotism, mesmerism psychology and animal magnetism present so many points of interest that they have in later years attracted widespread attention; not only are learned men engaged in endeavoring to understand all that is problematical in them, but even the attention of the popular mind is attracted toward them, in expectation of deriving either amusement or instruction from their mysteries.

Hypnotism alone has given us the key to our historical criticism of that mysterious and mystical region of the human soul in which mesmerism psychology and animal magnetism, the hidden power plays its magical part. It has been the first to render intelligible the mysteries of fanaticism, magic and of sorcery, and to impart to them a scientific intelligence. Thus hypnotism becomes a valuable expositor of philosophy and history, directing attention toward the forbidden question of human nature, and rendering their perceptions more acute, while it enriches them with facts and ideas which they would not otherwise have possessed.

This power has been employed to some extent by the learned and wise and brave of all ages—by the African voo-doo, the Hindoo fakir, the Egyptian priest, the Hebrew prophet, and by the wonderworkers of all age and climes. But it is only in modern times and very recently, that this vast and unlimited power has been known and employed successfully. Ancient sages and medieval philosophers strove in vain to solve the problem and find the power. It remained for the present-day scientists, with their better knowledge, clearer light and higher perception, to break the seal, unlock the doors of nature, discover the power, and reveal its method of operation. This now has been done, making a plain science of what was an impenetrable mystery and making its process so plain that any intelligent man or women can learn to employ its invincible power with wonderful success, excelling the marvels of the past as far as day excels night.

The first scientific treatment and understanding of hypnotic phenomena commences with the introduction of Mesmer, followed by the English surgeon, Baird, to whom belongs the merit of having taken hypnotism from amidst the blackness and oblivion of charlatanry, defining the different stages of hypnotic sleep, and bringing it to the notice of the medical profession, as an aid in therapeutics.

Definition, Cause And Susceptibility To Hypnotism

Hypnotism is the science of the sleep-like state (hypnos) which manifests itself by various nervous phenomena, and is produced, in certain persons susceptible of it, generally by some especial influence on the nervous system exerted by another—is an organic development of the power inherent in man.

The cause of the phenomena of hypnotism lies in the inhibition of the activity of the ganglion-cells of the cerebral cortex or the gray matter of the brain, the inhibition being brought about by gentle prolonged stimulation of the sensory nerves of the face, or of the auditory nerve, by psychic suggestion, and by various other means.

It is popularly supposed that only weak-minded, sickly, nervous persons are susceptible to hypnotism. This is an error, however, for recent statistics have conclusively proven that almost anybody can be hypnotized, although there must be distinction made between those whom it is easy and those whom it is difficult to hypnotize.

In ancient times the results of hypnotic phenomena were regarded as the working of divine power. After the introduction of Christianity, however, the belief in the divine origin of these phenomena ceased. They were regarded instead as the works of the evil one, and those who possessed such power were regarded as sorceresses and witches. Those witches who were persecuted during the middle ages and up to recent times were nothing but somnambules (hysterical persons —persons who fell into hypnotic sleep.)

To show the prejudice and darkness which enshrouded this phenomena, we will quote from one of our distinguished historians: "No land and no people were behind the rest in this cursed drama—every party in religion vied with the others for the first rank in the persecution of witches; hundreds of thousands were sacrificed, and misery spread its wings of darkness everywhere, even the sick, and children of from nine to fourteen years of age as well as old men, were struck by the destroying power; neither the traveling journeyman on his way, nor yet even the blind maiden was spared."

Happily, prejudices of all kind are giving way before the power of knowledge and enlightenment, and hypnotism has no longer to strive against the spirit of the age, and so under the protection of science and general intelligence it will become an active and useful agent.

The conditions favorable for hypnotizing are: 1. Medium intelligence. 2. Persons of an hysterical temperament. 3. Young persons of from ten to twenty. There are other conditions favorable for the promoting of hypnotic sleep, such as a warm, quiet operating room, sweet music, semi-darkness, etc.

Hypnotic sleep is hindered, in many ways, viz., by a high or low temperature, alcohols, dazzling light, violent emotions, full stomach, distracting noise, etc. It is impossible to hypnotize idiots.

Methods Of Hypnotism

The hypnotic state is brought about by a series of suggestions, consequently, to become successful, one must be well versed in the laws of suggestion; and combined with this essential principle, one must have facility in concentrating the attention and holding it thus fixed, energy of will, calmness of mind, patience, and entire devotion to the matter in hand. The person who is deficient in these particulars will hardly become a good hypnotizer.

The hypnotic can be produced by various methods. It matters little as to the method so long as you get the attention of the subject; or force his mind to concentrate on any one thing. The steady gazing at the eyes of the operator, exploding gun-powder, electric sparks may produce hypnosis.

Method

Select a young man requesting him to seat himself on a chair, and give him a button to hold, telling him to look at it fixidly. After four or five minutes his eyelids fall; he tries in vain to open his eyes, which are fast closed; his hand, which until now has grasped the button, drops upon his knee. Assure him it is impossible for him to open his eyes. (He makes vain efforts to open them.) Now say to him, "Your hands are stuck fast to your knees; you cannot possibly raise them." After which blow upon his eyes, which open at once, and he is in the same state as before the experiment.

PLAN OF MESMER

The celebrated Mesmer, who claimed the discovery of animal magnetism, always employed a complex apparatus to generate, or rather to collect the magnetic fluid pervading, as he believed, all space; and to direct a stream of it upon the patient, in order to cure diseases. In these recent times, when it is believed that all the astonishing effects of animal magnetism are produced by the action of the mind of one individual upon the nervous fluid of another, or by the actual transfer of the vital spirits from the magnetizer to the person magnetized, by a simple effect of the will, it is curious to recall the rude methods of Mesmer, who produced the same effects without being at all conscious of the mental character of his operations. The following description is an account of his apparatus and mode of acting, as given by the Royal Commissioners appointed by Louis XVI. to examine his pretentions, in 1784.

In the middle of a large room was placed a circular vessel or tub, a few feet in height, furnished with a lid in two parts, moving on hinges in a central line. This lid was perforated with holes through which were inserted a number of firm and movable rods. Its interior was occupied by bottles filled with water previously magnetized. These were placed over one another in such a manner, that the first row had their necks converging towards the center of the vessel, and their bases turned to the circumference; and the next set was arranged in an opposite direction. The tub itself contained also a certain quantity of water, filling up the interstices which were left by this symmetrical arrangement of bottles; and to this a quantity of iron filings, pounded glass, sulphur, manganese, and a variety of other substances, was occasionally added. The patients then stood round the apparatus, and applied the iron rods to affected parts of the body, or encircled themselves with a hoop suspended for that purpose. Sometimes they laid hold on each other by the thumb and index finger, and formed what was called a chain. The magnetizer then held an iron rod, which he moved to and fro before them, for the purpose of directing at will the course of the magnetic fluid. The whole apparatus, or water, bottles and metallic rods, was supposed to facilitate the circulation of the fluid; and during this time a person occasionally played on the piano or harmonicon; for it was one of Mesmer's opinions that the magnetic fluid was especially propagated by sound. Though the apparatus just described was used to increase the power of the magnetizer, yet the universal fluid was supposed to be every where, and the magnetizer himself was thought to possess a certain quantity which he could communicate and direct, either by means of a rod, or simply by the motion of his outstretched fingers. To these gestures, preformed at a distance, were also added certain slight touching on the hypochondria, the epigastric region, or the limbs. In order to increase the power of these processes, trees, water, food and other objects, were magnetized, for all the bodies in nature are according to Mesmer, susceptible of magnetism.

The following particulars are taken from Mesmer's own directions for using animal magnetism.

When a healthy person is brought into immediate contact with a sick person, in whom one or more functions are disordered, the latter feels, in the morbid part, sensations more or less acute.

In order to magnetize the patient, you must place yourself opposite to him, with your back turned towards the north, and draw your own close against his feet; you must then place, without pressure, both your thumbs up on the plexus of nerves in the epigastrium (the pit of the stomach), and stretch your fingers towards the hypochondria (the part of each side of the body where the ribs are found). It is beneficial, occas-

sionally, to move the fingers on the sides, especially in the region of the spleen.

Before you cease magnetizing, you must endeavor to put the magnetic fluid in equilibrium in every part of the body. This may be done by presenting the index finger of the right hand at the summit of the head, on the left side, and then drawing it down the face to the breast, and over the lower extremities. In this manoeuver an iron rod may be used instead of the finger. When patients form a chain, in the manner already described, by taking hold of each other's hands the power of magnetism is augmented.

The effects produced by such process, says the Baron Dupotet, were not less strange than the processes themselves. The patients experienced many unusual sensations, such as undefinable pains in the body, particularly in the head and stomach; an increase or suppression of cutaneous perspiration of the heart and a momentary obstruction of breathing. Sometimes a certain exaltation of the mind, and a lively sense of comfort were experienced. The nervous system in particular, was often powerfully affected. Ringing in the ears, vertigo, and sometimes somnolency of a peculiar kind supervened. These effects were varied according to the constitution and the disease of the patients but they increased as the operation proceeded, and terminated in convulsions! When many patients were magnetized at once, and one became affected with convulsions, the others soon exhibited the same symptoms. The condition was termed a magnetic crisis; it was regarded as an effort of nature to effect a cure, and it was the constant aim of Mesmer to produce it. Many very curious moral phenomena were also commonly displayed during the magnetic operation. Some patients burst into immoderate fits of laughter; others were dissolved in tears. Some seemed attracted towards each other by the strongest affection, while others displayed mutual antipathy. But the most surprising circumstances was the prodigious influence that the magnetizer exercised over his patients. The least sign of his will excited or calmed the convulsions, and commanded love or hatred. He thus stood before them like a magician with his wand, keeping their souls and bodies in submissive obedience.

PRINCIPLES OF DELEUZE

But the progress of science since the days of Mesmer, has proved that many of his processes were altogether unnecessary, and the use of machinery, or metallic wands, is now entirely relinquished. Though convulsions are still produced, in some persons, by the magnetizer, it is no longer his desire to produce them; for all the benefits, and all the curious mental phenomena, of magnetism may result without any such consequence. The manual processes of different operators are exceedingly various; and it is found, that after an individual has been placed several times under the influence of magnetism, all its effects may sometimes be produced by the simple will of the magnetizer, without any manipulation whatever! Two doctrines now divide those who practice on the principles of this science into different sects. The first attributes all the phenomena to the action of the nervous fluid of one individual, directed by the will, over the nervous system of another; while the second considers the soul itself as one of the chief agents in producing these effects. To avoid confusing the mind of the reader with unnecessary statements of these differences of mere

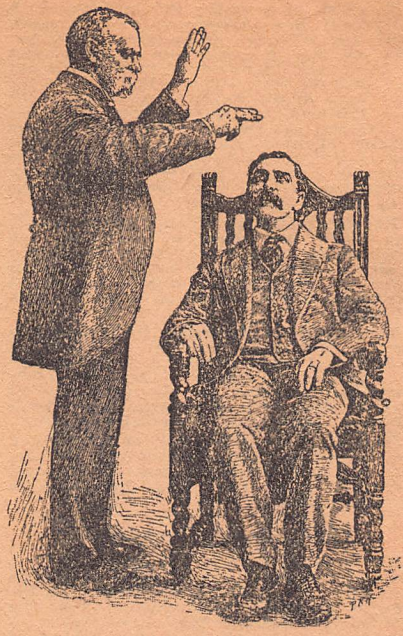


Illustration Showing Subject Being Hypnotized By the Suggestive Method

opinion, it will be best to give the doctrines of the science, as now generally believed, from the work of M. Deleuze, one of the most active and successful practitoners of animal magnetism, omitting only those of his principles that have been disproved, or rendered doubtful by the experience of his brethren. In his chapter of General Views and Principles, this highly distinguished author makes the following statements.

1. Man has the faculty of exercising over his fellow man a salutary influence in directing towards them, by his will, the vital principle.

2. The name of Magnetism has been given to this faculty; it is extention of the power which all living beings have, of acting upon those who submitted to their will.

3. We perceive this faculty only by its results; and we make no use if it, except so far as we will use it.

4. The first condition of action, then, is to receive the will.

5. As we cannot comprehend how a body can act upon another at a distance, without something to establish a communication between them, we suppose that a substance emanates from the magnetizer, and is conveyed to the magnetized persons in a direction dictated by the will. This substance, which supports life in us, we call the magnetic fluid. Its nature is unknown, and even its existence has not been demonstrated; but everything takes place as if it existed; and this justifies us in admitting its existence.

6. Belief in our power to accomplish our purpose is as necessary to the effect as the will to do it; for without self confidence the magnetizer will not succeed.

7. In order that one individual should act upon another, it is necessary that there should be a moral and physical sympathy between them; and when this sympathy is produced, we say that the parties are in communication with each other.

8. In order that the action of animal magnetism should be safe and useful, it is necessary that the magnetizer should be influenced only by the desire of doing good.

9. Direct communication between persons is not absolutely necessary to the transfer of the magnetic fluid; for water, food, and other bodies may be charged with the fluid, and employed to convey it to the person for whom the magnetizer expressly designs it.

10. Magnetism or the operation of magnetism, springs from three things:—the will to act, a sign to express that will, and confidence in the success of the attempt; and unless the purpose be also good, the effects, though obvious, will be irregular.

11. The faculty of magnetizing exists in every one, but not to the same extent. The difference is caused by the moral and intellectual superiority of some over others, and the most important requisites is a powerful magnetizer and self-confidence, energy of will, the power of concentrating the attention and the will upon one object for a long time, benevolence, moral courage, and self-possession on the occurrence of alarming crisis, and patient calmness of mind. Good health also increases the power, because it is a mark of vital energy. When all these advantages in a high degree are combined in one individual, he is often found to possess such magnetic power that sometimes he may be obliged to moderate it. The power is very much increased by practice.

12. The magnetic influence flows from all parts of the body, and the will may direct it anywhere; but the hands and the eyes are better fitted than other parts to throw off and direct the current determined by the will.

13. Magnetism can be conveyed to great distances when persons are in perfect communication.

14. There are some individuals who are sensible of magnetic action; and the same individuals are more or less so, according to their temporary dispositions at the moment. Persons in good health rarely feel its effect; nor are we able to judge, except by trial, who is subject to them, and who is not; but at least three-fourths of mankind may be acted upon.

15. Women and men possess the power of magnetizing in an equal degree.

16 Whatever vital energy or magnetic fluid is conveyed to the patient by the magnetizer, is lost by the latter; and if the sessions be continued too long, or be too frequently repeated, he may become very much exhausted by this loss. The weakness sometimes felt by the magnetizer is not produced by the motions and exertions that he uses, but by the flow of the fluid from him to his patient.

17 Confidence on the part of the person magnetized is not necessary to success.

18 The choice of a particular process is not necessary to give direction to the action of magnetism. It is best however, to choose and follow some one method, so as never to be perplexed and compelled, while acting, to draw off the attention, in order to decide what motion it is most proper to take.

19 It is very dangerous to interrupt a crisis, however alarming it may be; and we should never attempt to act, unless we are secured against all interruptions from our own affairs the person magnetized or his friends.

Such are the doctrines now usually adopted by the professors of animal magnetism.

INFLUENCE OF ANIMAL MAGNETISM ON THE MIND

It was the celebrated Marquis de Puysegur who first particularly observed the condition that has been termed magnetic somnambulism. He was a student of Mesmer, and a most able magnetizer, practicing the art solely for the benefit of the sick, and universally beloved for his benevolence and amiability. The history of his discovery is as follows:

While magnetizing his gardener, an ignorant rustic, he observed him fall into a deep and tranquil sleep. It then occured to him to address to the sleeper a few questions, which he did, and the man immediately answered him with intelligence and clearness. He soon found that he possessed a peculiar power over the mind of his patient, and that he had but to will a question and it was answered. Their souls seemed to be in communication as well as their bodies! In speaking of his gardener while in this condition, he says: "He is no longer, when in the magnetic state, a peasant who can hardly utter a single sentence, he is a being to describe for whom I cannot find a name. I need not speak; I have only to think before him, when he instantly hears and answers me. Should any body come into the room, he sees him if I desire it, and addresses him, and says what I wish him to say, not indeed exactly as I dictate to him, but as truth requires. When he wants to add any thing more than I deem it prudent strangers should hear, I stop the flow of his ideas, and of his conversation, in the middle of a word, and give his thoughts quite a different turn. I know of no subject more profound, more lucid, than this peasant in his crisis. I have several patients approaching his state of lucidity, but none to equal him." This patient, like many others since observed, had the power of perceiving his own internal structure, and distinguishing what was the disease. He prescribed what treatment he required, when he would be benefited by being magnetized again, and when he would be well, if so treated. The Marquis followed his directions, and every thing happened as he predicted.

All the magnetizers who now attempt to treat diseases in this manner, prefer the knowledge of the patient when possessed of this lucidity and second-sight (clairvoyance and prevoyance) to their own judgement, and the result proves the propriety of doing so. "These patients," says the Marquis, "during the crisis, possess a supernatural power, by which, on touching a patient presented to them, as passing their hand even over the clothes, they feel which is the affected viscus (internal organ)—the suffering part; they point it out, and indicate pretty nearly the suitable remedies." One of these sleepers told the Marquis that he was subject to frequent headaches, a buzzing in his ears, which was true, though he had complained of it to no one. A young man who was present at this experiment, but who ridiculed the pretensions of magnetism, was told that his complaint

consisted in pains in the stomach and other disorders in the abdomen, that had been produced by a disease which he had suffered from some years before. And when, still doubting, he applied to be examined by another magnetic somnambulist, distant some twenty yards from the first, he was told just the same thing, by which he was utterly confounded.

A well-known physician of high standing at Providence, Rhode Island, at one time employed a sleeper in his family, to assist in determining the character of occult diseases in patients who consulted him at his office. The results were singular and important. Once she declared the cause of deafness by describing the internal ear and brain, and at another time pointed out the cause of an incurable blindness, by describing a red tumor at the back part of the eye. She knew nothing of anatomy, and the parts described are entirely out of the reach of natural vision.

M. Husson describes the condition of the sleeper in this state as follows:

"The somnambulist has his eyes closed. He neither sees with his eyes, nor hears with his ears; yet he sees and hears better than a waking person. He sees and hears only those with whom he is in relation. He sees only that at which he looks, and he usually looks at those objects only to which his attention is directed. He is submissive to the will of the magnetizer in all things which cannot injure himself, and in all that does not oppose his own ideas of justice and truth. He sees, or rather he has a perception of the interior of his own body and that of others; but he usually remarks those parts only which are not in a natural state, and which disturb the harmony of it. He recalls to his memory things which he had forgotten in his waking state. He has provisions and presentiments which may be erroneous in several circumstances, and which are limited in their extent. He expresses himself with surprising faculty. He is not free from vanity. He becomes more accurate by degrees, for a certain time is guided with discretion, but if ill-directed he goes astray. When returned to his natural condition, he entirely loses the recollection of all the sensations and ideas he had during his state of somnambulism; so that those two states are as entirely strangers to one another as if the somnambulist and the waking man were too different persons."

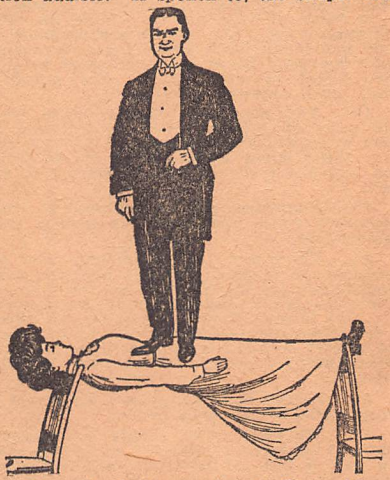
No obstacle seems to bound the vision of the somnambulist, and at the will of the magnetizer he can see sometimes from the back of the head, and sometimes from the pit of the stomach, or the tips of the fingers.

INFLUENCE OF ANIMAL MAGNETISM ON THE BODY

The effects of animal magnetism are various, because they are influenced not only by the constitution, actual condition, and faith of the patient, but also by the energy and the moral and the physical character of the operator.

Many of these effects are so astonishing, that the student of this wonderful subject is absolutely alarmed, at first, by the multitude of well authenticated facts that seem to exceed the bounds of faith. But when they are attentively examined, beginning at first with those which are of a more simple nature and then proceeding to those which are less consistent with our preconceived notions of the laws of nature; especially when we compare these effects with the symptoms observed in natural somnambulism, in certain cases of epilepsy and in hysteric cataleptic ecstacy, we shall be prepared to acknowledge that it is impossible to refuse them our credence, however difficult it may be to explain them in a manner completely satisfactory. We cannot deny the truth of well authenticated facts simply because they are mysterious for all nature is a mystery.

When an individual is placed under the influence of magnetism, the symptoms most commonly observed in the first instance are as follows: Slight pricking and winking of the eyelid; an increased, or sometimes a diminished, rapidity of the pulse; a sensible alteration of the temperature of the body; a flushing or an extreme paleness of the cheeks, and a remarkable change of the countenance; stretching, or a deep yawning comes on; a gurgling in the throat is often heard; the patient may feel a desire to move, but finds himself unable to do so; he experiences an indescribable composure, and a sense of calm delight; the breathing becomes much affected. and is sometimes rendered much slower, evtn when the pulse increases in rapidity. These are the simplest effects, but often, under circumstances not to be foreseen, phenomena of a more remarkable character appear. The eyelids become spasmodically affected, and close against the will of the patient. He finds it impossible to keep awake, and, if the operation be continued, he gradually sinks into a slumber more or less profound. The head falls on the chest, or thrown backwards; the eyelids are generally half open, and eyeball moves slowly in the socket, but gradually becomes fixed; drops of mucus fall from the lips, the limbs become cold, and the respiration audible. If spoken to, the sleeper may



Hypnotized Person In A State Of Cataleptic Rigidity

attempt to speak, without success, or he may start awake, rub his eyes, stare round with astonishment, and remember what has passed as we remember a dream. To disturb any one in this state is highly improper, for this may produce convulsions, and the interference of others with the proceedings of the magnetizer may produce dangerous consequences. Convulsions, or crisis of the kind described by Mesmer, are not at all uncommon.

The kind of sleep just described differs entirely from natural sleep. Its phenomena were first discovered by the Marquis de Puyeeger, and have escaped in a great degree, the observation of Mesmer. In order to distinguish it from the natural, it has been termed the magnetic sleep, or Somnambulism. It may be more or less complete.

In order to give the reader an idea of the condition of a person who has been thrown into the state of magnetic sleep, we will now describe the phenomena observed by all who have given serious attention to this singular subject. In this peculiar state the surface of the body is sometimes actually sensible, but more frequently, the feeling is totally destroyed. The jaws are firmly locked, and cannot be opened by any effort; the limbs are often rendered inflexible; the senses of sight, hearing, and smell are so completely benumbed, that neither the strongest light, the loudest sounds, nor the most pungent odors, can arouse the slighest attention. We may prick, pinch, tear, or burn any part of the body, without awakening the consciousness of the patient. Extreme and altogether unwarrantable cruelties has often been practiced upon persons of magnetic sleep, and though unfelt at the time, they have given rise to great torture after the senses were recovered. Though these proceedings were most unwarrentable, it is now too late to remedy them, and we may quote them without impropriety in proof of the wonderful effects of magnetism, after protesting against the repetition of such injurious and dangerous experiments.

PSYCHOLOGY PATHETISM

The following will be sufficient to show in what respects the IDEA of Pathetism comprehends all of Mesmerism, and exceeds all that can be done by operating through one of the external senses merely:

1. Pathetism operated and produced all the results of Mesmerism, without the labor of the WILL, or its peculiar processes. It had always been objected to by Animal Magnetism, that the effects of the will imposed upon the operators were exhausting to his system, and often injurious.

2. Pathetism produces the same and more results, without the labor of the will, and no persons wide awake, while they are perfectly conscious of relations and things.

3. It has the vast advantage of producing the same results not on one individual, but on one, or a hundred at the same time!

4. Pathetism produces all the phenomena often without requiring any conditions of the patient; and it is the only theory that can consistently attempt to do so. In Mesmerism you must, (at first, certainly) gaze at the patient, and take hold of his hands. In Neurology, you must touch your patient, in some form. So in Hypnotism, you must have the sense of sight, and the patient must fix his eyes upon something. But not so, necessarily with Pathetism; it produces results, and tells how they are produced, when no conditions whatever are required of the patient!

5. Pathetism operates without always requiring any conditions from the attending spectators! Thus multitudes have been affected and brought completely under controls while there has been any amount of noise, mirth and excitement throughout the entire audience. In thousands of instances persons have been controlled immediately in their muscular emotions and mental impressions, in public audiences, when they were overwhelmed with emotion, and carried almost to frenzy in their excitement. In those cases there were, there could be, no mesmeric passes, no "coin" no "zinc and copper" nor any other object to gaze at, no "profound silence," no "electro-re-active conditions" required.

6. Pathetism operates on the entire audience at one and the same time, a thing never attempted or done by any other theory, old or new.

7. It operates not only on persons in the "normal" or walking state, but it carries them into the higher state of Trance and Ecstacy, and in these states induces phenomena without addressing either one of the external senses.

8. It dispenses with the unfounded notions in respect to the pretended "electricity" of the "Trators" of Perking, the "zinc and copper," "coin." And when results are produced by using certain substances, as coin, or a piece of charcoal, this theory shows how it is that they come to pass.

9. The method of Pathetism compelled persons to come out from public audiences, and place themselves on my platform! It may be an easy thing to experiment on persons after they have left the audience, and seated themselves near to the operator; but not so common to experiment upon them, and thus cause them to leave their seats, even before they had any suspicion of an influence exerted over them.

10. And more! I have, by Pathetism, controlled persons not only "immediately," even before they had taken their seats in my public lecture room, but I have also Fascinated them at a distance of a mile, and in that state have drawn them to my hall!

11. Pathetism is original, causing one somnipathist to perform experiments upon another, as for instance, I first entrance A, then A entrances B, and B entrances C, and so on from one to fifty.

Unity—In the theory of Pathetism, then, we find a PRINCIPLE which runs through human nature, and one which is sufficient to account for one and all of the phenomena which ever were or ever can be artificially induced in the nervous system, because by applying this same principle we find that one and all of these diversified results can be produced by addressing the mind through either of the external senses. After the relation is once formed, then results may be induced by the will force merely.

Practical Directions for Pathetizing.—From the information already given, it is supposed the reader must now either have some idea as to my method, or at least he must be prepared, somewhat, to appreciate the rules which follow.

It is not so easy to give specific directions to be applied generally, to all men.

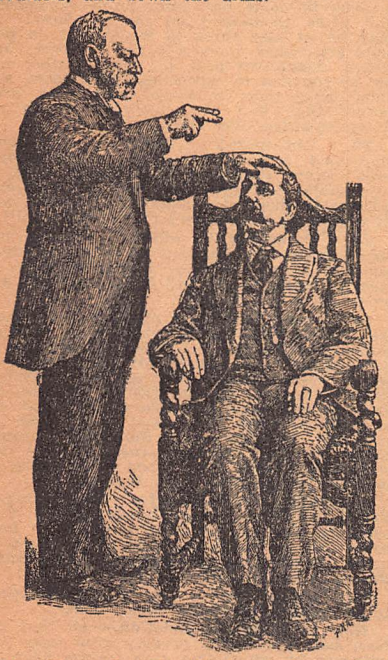
How to Form the Relation.—All that has been said enters into, or may enter into, that influence by which you gain control over the mind of your patient. But the specific directions for forming the relation upon which all your power depends, have respect to each of the External Senses, which are the avenues through which you gain access to the human mind. You may address yourself to either, and produce results when the relation is once established. But the best way for forming it is to begin with:

Hearing.—The sense of hearing. You peremptorily assume the power to accomplish the result, without the possibility of failure!

You are active positive and simply require your patient to be passive, negative. This assumption is made, by addresses to the sense of hearing.

Sight.—The sense of sight. This is of less importance at first, than hearing. Yet, if you secure it so much the better. If the patient fix his sight by your direction, then you have that avenue in his mind, also.

Feeling.—The sense of feeling. As this sense is located especially in the hands, you direct the patient to put his hands together, clasp them and let them remain passive in his lap. The mind may also be reached through the sense of feeling, by placing one or both of your hands upon the front and coronal region of the head, or if you pass your hands gently over the head, the face, or any part of the system which may be affected with disease. If you operate on one at a time, stand by the side, place your left hand on the top of the head, and make the passes, over the sides of the face, with the other; or, stand behind the patient, and, with both hands, make the passes over the head, shoulders, and down the arms.



Using Hypnotism For Curing A Person Of A Bad Or Undesirable Habit

The Time.—If the patient be at all susceptible, all these Rules followed, it next becomes a question of time, simply, as to how long before you can get control of his nervous system. From one to twenty minutes will determine.

Power.—You should remember that you can exert, in most cases, more power through three senses, than you can through one. Hence, to ascertain whether the Relation be really formed, you address your patient and say to him, "Now you cannot pull your hands apart," at the same time putting your hand upon his (sense of feeling.) The patient makes an effort and finds himself unable! Or, you close his eyes, and say to him, "Now you cannot open your eyes!" He tries and cannot!

Is the Relation Established?—This process continued and repeated a few times, the Association, or RELATION, becomes fully established between you and your patient, and this done, remember that his own will executes, in his own nervous system, the dictates of your Love, so that whatever you WILL and command him to feel, or will, or do within the degree of his developments, results as the consequence. That is if you express your will to him while he is under the spell, your control over him will correspond with the degree in which your mind is associated with his, whether in the Sensuous, MENTAL, or SPIRITUAL state.

In this way you may bring on the trance by merely speaking to him, rouse him out of it, relieve him of pain, cause him to have conceptions of things, real or imaginary, past present or absent.—Thus you may cause him to dream; you may change his appetites, disposition and habits of life; and thus, also, he may control and govern himself by his own determinations formed in his own mind, while under the spell, provided you tell him to do so.

The Sitting.—The sitting should not be continued longer than is agreeable to the patient. You release him by the laws of association, the same as you began. That is, you may address either of his senses for this purpose. The sense of hearing, by the word, Done!" The sense of sight, by a motion of the hand; or the senses of feeling, by gently patting the back and upper portion of the head.

To be Remembered.—The patient should always be made acquainted with your design, to produce any result, beforehand, before and during the sitting. He should become passive, and settle his mind on the result. His sight and hearing should be fixed or suspended, so that he may sink; without interruption, or resistance, into a state of reverie.

The relation once formed, the patient is completely controled by your suggestions, as you suggest, or tell him what he can do, what he cannot do, what he shall feel, or hear, or see; and, so sure as your spheres assimilate, so surely will you see him doing exactly what you have dictated or commanded to be done.

Bear in mind that no two patients are precisely alike and hence the difference in your influence over different persons. Some you may carry up into a high state of trance while others can merely be impressed through their senses by what you say to them.

Degrees.—As there are states which may be superinduced by Pathetism, and, as the good you may be able to do your patient will depend, more or less, upon the depth or height of the state, so to speak, it may be well to consider each, a little more in detail:—

External.—The sensuous state is that in which all the results are brought about by addresses made to the external senses. And these are threefold, and have respect to what the patient Hears, Sees, and Feels.

Internal.—The second is a higher state, and extends more into the Sympathetic, and

this, also, is developed in three ascending degrees:

In the first degre, the patient's external senses are closed up, suspended.

In the second his mind is at oneness with the mind of the operator, so that his emotions, volitions, and actions correspond with those with whom he is in communication.

The third degree, is that state in which the somnipath becomes lucid, and has an acute sympathetic preception of whatever is forced upon his attention by the mere will of the operator.

Spiritual.—And higher still is the next degree, which is called SPIRITUAL, because, in this state, the patient hears, sees, and feels, independently of his own external senses, and independently of any force exerted upon him by the operator, or from the external world. And this, also may be said to be threefold, comprehending all that went before.

The patient has knowledge (according to the degree in which his wisdom faculties are developed) of the external world.

He has knowledge of the internal world. Whatever is comprehended is Physiology, Phrenology the physical Organic, and Moral Laws of the universe.

And also of the spiritual world, or the world of causes, the spheres above, the Laws of Association, Progression, and Development, the Final destiny of the Race. In each of these states, various shades of difference may be observed, all depending on the degree in which the patient's capacities are developed. But it should be remembered, that one will succeed the other in the progress of time. The laws of progression are very rapid. Hence the necessity of patience and perseverance in the use of the means before described, under the encouraging assurance. that there are but few, if any cases, where they can be conscientiously used in vain.

Cautions.—There is really, no need of any difficulty with your patient, at any time. Nevertheless, for the want of attention to some of the preceding rules, you may possibly, in some unlooked for emergency, find yourself unable to determine what should be done, and you will remember it, perhaps if put down here under the head of cautions.

Never become excited yourself, while your patient is under your influence, in a deep state of trance.

If your patient becomes convulsed, do not be alarmed, Relieve him in the manner I have directed.

If you find it impossible to rouse your patient from a deep state of trance, let him sleep it away himself.

Do not suffer disagreeable persons to approach one who is in a state of trance.

If your patient should relapse into an unconscious state after having been once intranced, you should FORBID it! Do something to prevent it, while he is in the trance, and say to him, "I will prevent it; you will not, cannot fall into it again."

ARTIFICIAL SOMNAMBULISM

Rather more than a quarter of a century ago two Americans visited London, who called themselves Professors of Electro-Biology, and claimed the power of Subjugating the more determined wills, paralyzing the strongest muscles, preventing the evidence of the senses, destroying the memory of the most familiar events of the most recent occurences, inducing obedience to any command, and making an individual believe himself transformed into any one else. All this and more was to be effected, they said, by the actions of a small disc of zinc and copper, held in the hand of the "subject" and steadily gazed at by him, so as to concentrate the electro-magnetic action.

The pretensions of these professors received before long a shock as decisive as that which overthrew the credit of the professers of animal magnetism when Haygarth and Falconer successfully substituted wooden tractors for the metallic tractors which had been supposed to convey the magnetic fluid. In 1851, Mr. Braid, a Scotch surgeon, who had witnessed some of the exhibitions of the Electro-Biologists, conceived the idea that the phenomena were not due to any special qualities possessed by the discs of zinc and copper, but simply to the fixed look of the "subject" and the entire abstraction of his attention. The same explanation applied to the so-called "magnetic passes" of the mesmerists.

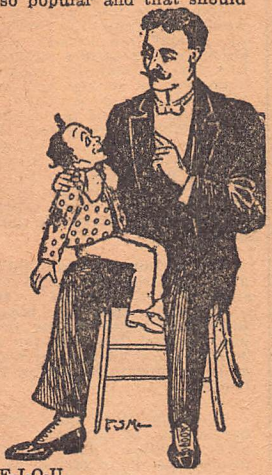
The monotonous manipulation of the operator produced the same effect as the fixed stare of the "subject." He showed by his experiments that no magnetizer, with his imaginary secret agents or fluids, is in the least wanted, but that the subjects of electro-biology are influenced by simply gazing fixedly at some object for a long time with fixed attention.

The condition thus superinduced is not hypnotism, or artificial somnambulism, properly so-called. The "Electro-biological" condition may be regarded as simply a kind of reverie or abstraction artificially produced. But Braid discovered that a more perfect control might be obtained over "subjects" and a condition resembling that of the sleep walker artificially induced by modifying the method of fixing the attention. Instead of directing the subjects' gaze upon a bright object placed at a considerable distance from the eyes so that no effect was required to concentrate vision upon it, he placed a bright object somewhat above and in front of the eyes at so short a distance that the convergence of their axes upon it was accomplished with sufficient effect to produce even a slight amount of pain. The condition to which the "subjects" of this new method were induced was remarkedly different from the ordinary "electro-biological" state. Thus on one occasion, in the presence of 800 persons, fourteen men were experimented upon; "all began the experiment at the same time; the former with their eyes fixed upon a projecting cork, placed securely on their foreheads; the others at their own will gazed steadily at certain points in the direction of the audience. In the course of ten minutes the eyelids of these ten persons had involuntarily closed. With some, consciousness remained, others were in catalepsy, and entirely insensible to being stuck with needles; and others on awakening knew absolutely nothing of what had taken place during their sleep." the other four simply passed into the ordinary condition of electro-biologized "subjects" retaining the recollection of all that happened to them while in the state of artificial abstraction of reverie.

The Art of Ventriloquism

Much has been written regarding this popular form of entertainment and it is our aim to simplify and not to confuse as in a majority of cases.

Ventriloquism is not the throwing of the voice as people are led to believe but merely the imitation of distant voices. Ventriloquism consists of two kinds, distant and near. The latter is used in connection with the wooden dummies that are so popular and that should be the starting point and the rest will come later and be far more easy.



How To Begin

Secure one or two ventriloquial figures and you are prepared for work. Select your dialogue and practice the following:

Stand before a mirror and speak. While speaking, maintain a fixity of countenance and a rigidity of muscles and nerves about the face and lips, so that no visible movement can be noticed.

Begin by saying as distinctly as possible the vowel sounds—A-E-I-O-U.

Next close the mouth and rest the upper teeth on the inner part of the lower lip, but be sure that your expression is easy and natural. If it isn't, make it so. Now, practice the vowel sounds again.

Some letters cannot be easily pronounced in ventriloquism. These are p, b and m. All words containing these letters will be hard to speak. When necessary to utter such a word you should substitute some similar sounds, or turn your mouth away from the audience, so that you can move your lips without being seen. The former method, however, is preferable and should be generally adopted.

For instance: If you wish to pronounce a word with a "p' in it, substitute "f' or "k." For "piano" say "feano" or "keano." For "m" say "n" or "ng.' For "molasses" say "nolasses." For "b" substitute "v" or "g." For "being" say "veing" or "geing."

Speak in the natural voice or the voice of some character you wish to impersonate. For instance, if you have an Irish figure, talk in the peculiar brogue known to the Irish people. Your success depends on how well you work your figures. The delusion is carried out by the movable jaw, hence there is no need of the sound of any distant voice. If you place a figure on either side of you, 12 feet distant, and speak without moving the lips, the voice will apparently come from the figure whose jaw moves. However, you must use a little trickery and indicate to the audience by word or gesture, from which figure the voice will come.

By following the above rules, you should be able to use figures in a couple of weeks.

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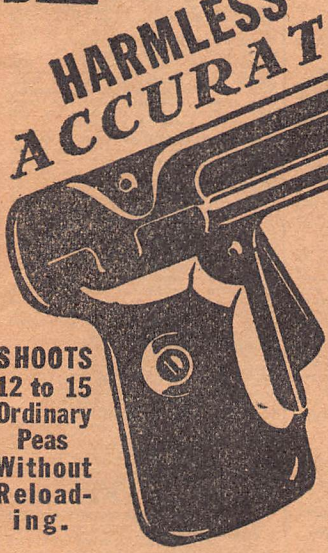

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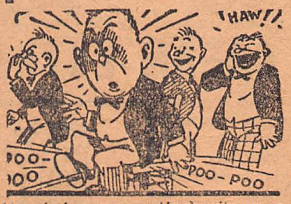
A decidedly novel and excellent writing pencil with eraser, that will give you plenty of use and amusement. In the holder is fitted a tiny microscopic picture, same as in our popular Watch Charms, Opera Glass Charms and Dissolving Views. Assorted views may be had, such as Bathing Girls and Actresses, in interesting poses. Views of Panama Canal, and even the Lord's Prayer, every word of which is rendered clear and distinct by the magnification lens. **PRICE 15 CENTS**

Whoopee Cushion



The Whoopee Cushion or "Poo-Poo" Cushion, as it is sometimes called, is made of rubber. It is inflated in much the same manner as an ordinary rubber balloon, and than placed on a chair, couch, seat, etc. When the victim unsuspectingly sits upon the cushion, it gives forth noises that can be better imagined than described. **PRICE 25 CENTS**

Bingo Shooting Device

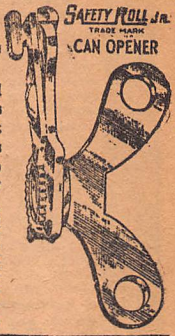
When loaded with a paper cap and set, it goes off with a loud bang when disturbed. Lays flat; takes up little room. Place it under a book, magazine, pillow, tray, or inside a purse or other article and watch the fun. **PRICE 10c postpaid. PAPER CAPS 10c box.** (Caps not mailable; shipped Express only..

PERFORMING COONS

Sambo and Dinah

These lively "Cullud Coons" are exceedingly popular wherever introduced, both with young and old. They can be made to dance to music or perform various gyrations and movements while the operator may be some distance from them. The figures may be examined by the spectators, and when handed back they are simply placed on a chair or table and they begin to move. Their movements are so natural that one is inclined to think them endowed with real life. At the word of command of the operator they will lie down, stand up, dance, etc. **PRICE 10 CENTS POSTPAID.**

NEW STYLE Can Opener



This is a new and improved type of can opener that puts the old style in the shade. It is simplicity itself to use, works right or left handed, shears the top out of any size and any shape can with standard rim. Works smoothly and simply and with ease, shearing a safety rolled edge. Leaves no jagged edges to cut the fingers or mar the contents. Entire cover comes off in a jiffy, permitting quick, easy removal of the contents. **PRICE 15c POSTPAID.**

Luminous Ghost

IT SHINES AT NIGHT. When displayed in a perfectly dark place, glows with a ghastly cold bluish radiance, enough to give one the "creeps." A real startler for those who come upon it unexpectedly.

PRICE EACH, postpaid.....15c

THE DYING PIG

The most laughable novelty yet produced. Made of rubber, and you have only to blow it up and stand the pig on his feet, when he begins to squeal as he slowly collapses and finally lies down and dies in the most natural manner. You can blow him up as often as desired, and each time he will go through the same performance to the great amusement and delight of your friends.

PRICE 10c, 3 FOR 25c POSTPAID.

CIGARETTE MAKER

Roll your own and save money. Better and quicker; costs less than half. Use your favorite brand of tobacco. Neat, useful and handy. Made entirely of metal, nickel plated. 25c, 3 for 65c postpaid. 560 page catalog of Novelties, Tricks, Puzzles. Free with order.

LOADED CIGARETTES

Just like ordinary cigarettes but each real starters. Box contains 10 real cigarettes. When about one third smoked, each cigarette goes off with a loud bang. Great fun. Entirely harmless. 25c box postpaid.

Send Orders for goods described herein to JOHNSON SMITH & CO., RACINE, WIS.

½ FORMER PRICE
INKOGRAPH
PENCIL POINTED PEN
NOW REDUCED TO $1.00

Combines the best features of fountain pen and lead pencil minus the weak points of both, plus improvements not found in either. Capable of doing anything possible and many things impossible with a fountain pen.

The Inkograph writes in ink with the same speed and ease of the softest pencil and is a joy to use. It feeds as fast as you can make your brain think or your hand move, and writes as even and uniform on the last page as it did on the first.

Makes 3 to 4 carbon copies at one time, while the original is in ink, bearing down on the point as hard as you like without injury.

Draws lines to a ruler without smudging. Writing point is shaped like a fine lead pencil point. Anyone can use YOUR pen because no style of writing can spoil its smooth point. Ideal for rough usage.

REQUIRES NO BLOTTER. The ink dries as fast as you write because the flow is fine, even and uniform.

CANNOT LEAK or soil the hands or clothing. Not the tiniest drop of ink will spill. An Inkograph will actualy improve your handwriting 100 percent. Has 14 kt. solid gold feed.

Your choice of Black, Jade, Black and Gold, Onyx, Black and White, Marine Green and Black, unbreakable Piroxalin. Every pen guaranteed.

AUTOMATIC FEED that instantly removes any obstruction from the writing point. This feed works freely up and down within the point, effectively removing any sediment and insures a perfect ink flow.

NO COMPLICATED PARTS to worry over—no mechanism to clean or get out of order. **PRICE $1.00 postpaid.**

PUT PHOTOS ON SILK, CLOTH, WOOD, PAPER, LINEN, ETC. 25c

It is now easy to print your snapshots and other photos on any cloth or other fabric surface — cushions, pillows, handkerchiefs, scarfs, ties, hosiery, underwear, paper, wood, linen, etc. The photos are washable. Will not fade or rub off—long lasting. Easy to do. Just follow a few simple directions. One bottle is good for about 50 prints in RICH TONES. Thoroughly practical. **PRICE FOR COMPLETE OUTFIT ONLY 25 CENTS SENT BY MAIL POSTPAID.**

Exploding Matches

More fun than fighting with your wife. They look just like ordinary matches, but explode with a loud bang when lit. 12 matches to a box. **PRICE 10c per box, 3 boxes 25c, or 75c per doz. boxes.** Not mailable. Shipped by express only.

BIG HUNTING KNIFE

With Genuine Leather Sheath

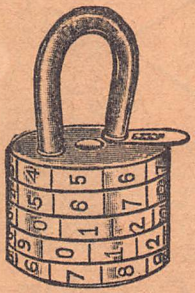
ONLY $1.00 POSTPAID

This is the ideal outdoor knife—an indispensable part of the equipment of every sportsman, tourist, Boy Scout and camper. Its utility far exceeds its modest cost. As a protective implement, it is always ready for any emergency.

ALWAYS DEPENDABLE
ALWAYS EFFECTIVE

It's an all-purpose knife for hunting, fishing or canoeing. Thousands of Boy Scouts own these knives. Whether you are cutting your way through underbrush, sharpening tent stakes, slicing bacon, dressing game, or doing one of the innumerable other jobs a sportsman asks a knife to do you will find it indispensable. Blade is about 5 inches long with mirror-like finish—strong, big, sturdy. Finely ground blade makes cutting easy. Note guard at bottom of handle to help grip and keep knife from slipping. Knife comes complete with genuine leather sheath, slotted so you can carry it on your belt. Also has strap to hold knife firmly in sheath while carrying it. **PRICE $1.00 POSTPAID**

KEYLESS LOCK



This is a 5-number lock—requires no key to open it. The secret combination is furnished with each lock, without which it is next to impossible for anyone to open it. The tumblers must be placed in their correct order before the lock will open. EACH LOCK HAS A DIFFERENT COMBINATION. No two alike. No keys to lose. Whether it is for securing your locker, your motorcycle, your boat, tool chest, bicycle, mail box or any other of a thousand uses, it will be found practical and effective. Very substantial construction, being made entirely of brass, nickel plated all over. The 5-number combination renders it practically thief-proof. **PRICE 20 Cents.**

CREAM EXTRACTOR

This is a most useful household device, for it automatically extracts the pure, thick cream from bottled milk. Simply place it in the bottle and the cream flow will start automatically at once, automatically stopping when the cream is drawn. Pays for itself in one week's use. Can also be used for syphoning other liquids—gasoline from your car, for instance. Made of pure aluminum in one piece only; will last a lifetime.

PRICE 25 CENTS POSTPAID.

Send Orders for goods described herein to JOHNSON SMITH & CO., RACINE, WIS.

MAGIC MONEY MAKER

ONE OF THE BEST NOVELTIES OUT

INSERT A PIECE OF BLANK PAPER, AND OUT COMES A DOLLAR BILL

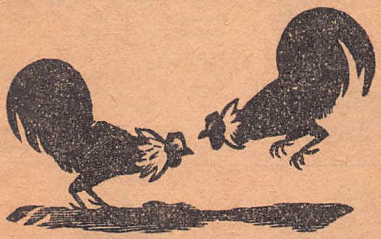
Demonstrate this machine to your friends and they will think that you have discovered something better than a gold mine. You simply insert a piece of white paper, turn the key and out comes a nice new dollar bill, you insert another paper, give another turn and out comes bill number two. You can repeat as often as you like. This isn't a counterfeiting scheme, but you can have a lot of fun in making your friends believe that you are printing real money.

No. S3198. THE MONEY MAKER. Price Postpaid..... 50c

The Fighting Roosters

A full blooded pair of fighting game cocks

These lilliputian fighters have real feathers yellow legs and fiery red combs, their movements



when fighting are perfectly natural and life-like, and the secret of their movements is known only to the operator who can cause them to battle with each other as often and as long as desired. Independent of their fighting proclivities they make very pretty mantel ornaments

No. 3425. Fighting Roosters. Per Pair..... 10c

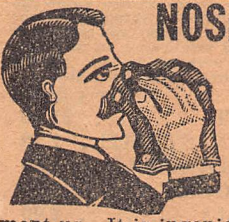
3 for 25c., or 75c per dozen postpaid

MAGIC FLUTE

The Magic Flute, or Humanatone, is a unique and novel musical instrument that is played with nose and mouth combined. There is just a little knack in playing it, which when once acquired after a little practice, will enable you to produce very sweet music that somewhat resembles a flute. There is no fingering, and once you have mastered it you can play all kinds of music with facility and ease. When played as an accompaniment to a piano or any other musical instrument, the effect is quite charming, as it is surprising.

No. S3478. Magic Flute 10c

NOSE BLOWER

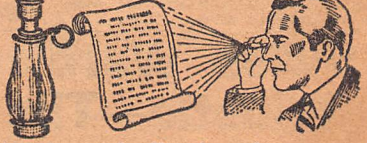


When some men blow their noses it sounds like a trombone. We have all got accustomed to those queer noises, but now the Nose Blower has come to torment us. It is ingeniously concealed in a handkerchief. On meeting your friends or at a party, after chatting awhile you carelessly take out this handkerchief and proceed to blow your nose. It's like a sudden clap of thunder. The ladies scream, and your male friends will think they hear the whistle of a steam engine. Everybody will put their fingers in their ears when they see you going to blow your nose again. You can blame the hideous noise to your having a very bad cold, and keep up the fun as long as you like.

No. S2192. NOSE BLOWER..... 10c

3 for 25c., or 75c. per doz. postpaid

Telescope Watch Charms



An imported French telescope watch charm, made of white bone, that contains the Lord's Prayer, the Ten Commandments, Bathing Beauties, etc. Equipped with a microscopic lens so that the Prayer, Commandments, or picture, as the case may be, can be easily read although almost invisible to the naked eye.

No. 8147. Lord's Prayer 15c

No. 8148. Ten Commandments 15c

No. 8149. Bathing Beauties..... 15c

Any 3 for 40c, or $1.35 per doz. postpaid.

CIGARETTES

You can now order your favorite brand of Cigarettes by mail and have them shipped to you by parcel post, free from observation no matter where you are located. All Cigarettes come twenty cigarettes in a package, ten packages to a carton. Thus each carton, which is the minimum quantity we sell, contains 200 cigarettes. Prices shown below do not include postage. Average shipping weight of each is one pound.. Please add sufficient to cover postage. Send remittance in any convenient form. We accept postage stamps in payment of all orders, large or small.

	Per Carton
No. 9154. CAMEL	$1.50
No. 9155. LUCKY STRIKE..	1.50
No. 9156. CHESTERFIELD..	1.50
No. 9164. OLD GOLD	1.50
No. 9166. FATIMA	2.00
No. 9169. MELACHRINO ...	3.50

Postage Extra

TOILET ASH TRAY

Here is a clever little novelty for your den or smoking table. It is in the form of a china commode with lid that will raise up and down. We have two titles: "Gentlemen Only," and "Ladies Only." They are really useful as an ash tray and never fail to attract attention and arouse comment.

No. 2883. Ash Tray for Gentlemen..... 15c

No. 2884. Ash Tray for Ladies..... 15c

CHINA ASH RECEIVER

This very novel Ash Tray is in the form of a china commode, which is mounted on the center of a 4-inch China Ash Tray. The Ash Tray is finished in luster with band of contrasting color. It makes a most attractive and interesting novelty for your den or smoking table.

No. 2885. China Ash Receiver..... 25c

NOVELTY OUTHOUSE

A mirth provoking novelty. Made of china depicting two colored boys, as shown in the illustration, one being inside the outhouse, while another is looking in from the outside.

No. 2886. Novelty Outhouse 15c

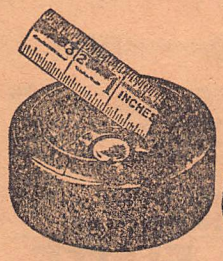
Flexible Steel Rules

Indispensable for Every Handy Man and Mechanic

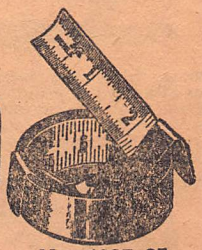
These Flexible Steel Rules are practically indestructible and are needed by every mechanic and in every home. The rules have very clear markings and can be twisted and turned without damage; they always return to their original shape.

No. 4227. 39 inch Flexible Steel Rule in metal case. Price..... 25c

No. 4228. 78 inch Flexible Steel Rule in Bakelite Case. Price..... 39c



No. 4228 39c



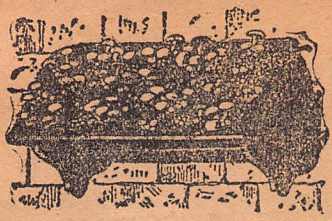
No. 4227 25c

Swiss Warbler or Nightingale Whistle—The Double Throat

This is the genuine Swiss Warbler or Nightingale Whistle, the original Prairie Whistle and Bird Call. It is a little instrument that fits in your mouth easily and without discomfort. With it you can imitate bird calls and the sounds of various animals by following the very simple directions. It is also sometimes called THE DOUBLE THROAT and as such it is of great aid to ventriloquists. It is used by professional ventriloquists, vaudeville entertainers, whistlers, and others. **ONE SAMPLE SWISS WARBLER SENT UPON RECEIPT OF 5c., or 5 for 10., or $1.00 per 100 by mail postpaid.** Big novelty catalog 10c. Stamps accepted.

Send Orders for goods described herein to JOHNSON SMITH & CO., RACINE, WIS.

Mushroom Spawn



Mushrooms are very easily raised from our spawn. All you need is a cellar, basement, closet, or spare room that you can close the light out, as they grow better in the dark. Our illustration shows a small shelf utilized for the purpose in the cellar. You can have shelves all round the closet or cellar and you will be astonished at the large quantity you can raise in a very small amount of space. All the little mushrooms you see on this shelf came out in one night. As an article of food there is nothing more delicious or inviting than mushrooms, and they may be cooked in an almost endless variety of ways. By selling them to your neighbors and storekeepers you can make several dollars a week, and several of our customers have informed us that they have made quite a profitable industry from a small investment.

No.5241. Price per Brick (weight about 1¼ lb.)...50c

Automatic Dime Bank

ENCOURAGE THE YOUNGSTERS TO SAVE.

NO EXTRA CHARGE FOR POSTAGE.

Another good and useful Automatic Savings Bank. All on the one principle. This one holds 50 Dimes ($5), and opens of its own accord when the last Coin has been deposited. Registered scale at the side with holes enabling you to see at a glance how much money the Bank contains at any time.

No. S2586. Dime Bank.....15c

CHANGE PURSE

Pocket size, nickel plated, and will hold $2.50 in pennies, nickels, dimes and quarters. Four strong springs hold the coins in place, and a slight pressure with the thumb instantly brings the coin wanted into your hand. No more fumbling in your pocket or pocketbook to get a certain coin wanted.

No. S2587. Change Purse.....25c

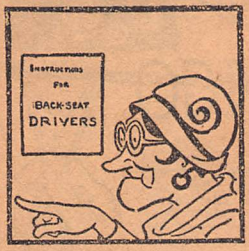
DANCING SKELETON

A jointed figure of a skeleton fourteen inches in height, will dance to music slow or fast, keeping exact time, and performs various gyrations and movements while the operator may be at some distance from it.

When handed to the operator, it is simply placed in position, when it will seemingly become endowed with life, and begins to move. At the command of the operator (who may be in any part of the room) it will lie down, stand up, dance, etc. For exhibition in the parlor, before social gatherings, etc. It never fails to create fun and amusement. We send full and explicit directions with each Skeleton, by the aid of which anyone can readily make it perform, to the astonishment of their friends or the public.

No. S3433. Dancing Skeleton.....10c
3 for 25 cents, 1 doz. for 75c.

Back Seat Driver's Card



There is a neat cardboard folder, with the wording "INSTRUCTIONS FOR BACK-SEAT DRIVERS" on the outside. What it contains on the inside when opened we prefer not to mention here. It isn't confined to many words, but what it does say is certainly brief and to the point. Have a few of these cards on hand; you'll need 'em.

No. S2856. Back Seat Driver Cards. Each.....5c
3 for 10c., 25c. per doz., $1.50 per 100.

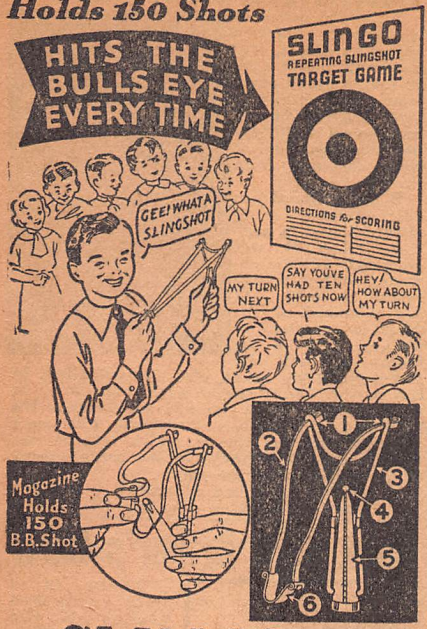
THE RIBBON FACTORY FROM THE MOUTH TRICK

If you want to have some fun, send for this Ribbon Factory Trick and draw yard after yard of various colored ribbons from an apparently inexhaustible supply. After filling a basket or covering the floor with ribbons, you can state that you feel much relieved after getting rid of your load.

No. S3202. Ribbon Factory Trick...10c
3 for 25 cents, 1 doz. for 75c

A Repeating Sling Shot

Holds 150 Shots



SLINGO

Well, boys, here it is at last. A real repeating sling shot, specially made to fire B.B. shot. There is a magazine in the handle that carries 150 B.B. shot, with patent feed. Easy quick loading for rapid fire shooting. A specially designed crotch insures perfect accuracy. Shoots hard and as straight as a rifle. The biggest sling shot hit in 50 years. No need to search for pebbles and stones. Just fill the magazine with a supply of B.B.'s that you automatically feed one at a time into the non-slip suede leather shot holder, and you are all set for a day's sport. And has it power! Boy! It has such amazing power that the shot will penetrate through the average 100-page magazine. Supply of B.B. shot free with each slingshot.

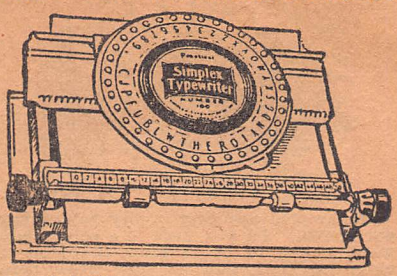
No. 3430. SLINGO SLINGSHOT. Postpaid 25c

ZIP-ZIP Slingshot

This Slingshot is the strongest and best and most powerful Catapult we have seen. The handle is made of special casting, all in one piece, and the rubber extra thick and strong, that will shoot an enormous distance. If you want the best money can buy, we recommend this Zip Zip. No. 3434. Price 50c

LITTLE GIANT TYPEWRITER

A FIRST CLASS TYPEWRITER FOR $1.50



A perfect little typewriter for **$1.50.** There are thousands of persons who would like to use a typewriter but whose needs and business do not warrant the expense attached to the purchase and use of a fifty or seventy-five dollar machine. To such persons we confidently recommend our Little Giant. It is strongly made, but simple in construction, so that anyone can quickly learn to operate it, and write as rapidly as they would with pen and ink. The letters of the alphabet most frequently used are so grouped as to enable one to write rapidly, the numerals 1 to 10, and the punctuation marks being together. With this machine you can send your best girl typewritten love letters, address envelopes, make out bills, and do almost any kind of work not requiring a large, expensive machine.

No. 2321. LITTLE GIANT Typewriter.... $1.50

REVOLVING DATE STAMPS 10c

This is the article for dating your letters, bills, orders, checks and other papers. Have you never had occasion to say: "I would give anything if that had a date"? Every letter, bill or order should be stamped with date when received, and again when answered, paid or filed. This, if practiced invariably, would save disputes about such matters. It will print any date for years in advance. You can adjust it to any desired date by simply revolving the bands. Each dater also includes four extra words, viz., Paid, Ansd., A. M. and P. M., which greatly increases its value. **PRICE 10 CENTS PREPAID.**

Price Postpaid 10c

No. 2373. DATE STAMP.

3 Card Monte Card Trick

Three cards, the ace, deuce and trey, are displayed and then laid out in a row on the table with the backs up. You invite someone to pick out the ace, which he is confident he can do, but to his surprise he does not succeed. You win every time because you cannot lose. Almost invariably he points to the trey. This trick is a favorite of professional gamblers. You can make the price of the trick in cigars alone over and over again, for you will find plenty of "wise ones" ready to take you on. **PRICE 10 CENTS POSTPAID.**

No. 3110. Three Card Monte Card Trick.. 10c

Send Orders for goods described herein to JOHNSON SMITH & CO., RACINE, WIS.

CHAMELEONS

What makes it change its color?

25c Each. Shipped By Mail
SAFE DELIVERY GUARANTEED

Get one of these most wonderful of all creatures. Watch it change its color. Study its habits. Wear one on the lapel of your coat as a curiosity. Watch it shoot out its tongue as it catches flies and insects for food. No trouble to keep. Can go for months without food. Measures about 4 inches in length. Shipped to any address in U. S. A. by mail. We guarantee safe arrival and live delivery. **PRICE 25 CENTS.** Specially prepared Food for Chameleons **15c** per package postpaid.

Big novelty catalog 10c. Stamps accepted.

HORNED TOADS

50c
EACH
By Mail
Postpaid

Safe, Live Delivery Guaranteed.

Horned Toads—most interesting pets. Head, back and sides armed with long, horny spikes. Although of apparently sluggish nature, when in search of food it runs like lightning. Watch it pounce upon flies. Amusement by the hour. No trouble at all to keep. Feed it on meal worms or let it seek its own food. Will live for years and years. Shipped by mail to any address in U. S. A. or Canada for **50 cents postpaid.** Guaranteed to reach you live and safe, or will replace free of charge. Specially prepared Food for Horned Toads **15c per package postpaid.**

Big novelty catalog 10c. Stamps accepted.

BABY ALLIGATORS

PRICE
$1.50
By Mail
Postpaid

Fascinating PETS From Louisiana Marshlands

How would you like a real live Baby Alligator for your very own? A rage for Baby Alligator pets has swept the country. We have arranged, at great expense to supply you with a GENUINE LIVE BABY ALLIGATOR just hatched in the deep marshlands of the South, at an amazingly low price. These corking little pets will be shipped to you by mail, carefully packed— safe arrival guaranteed. Think of the fun, the thrills you will have with one of these Baby Alligators. Read how fascinating they are, how interesting. Study nature. Remember, the alligator comes down to us from prehistoric days, from the age of dinosaurs! Do you want a Baby Alligator? You bet you do. What boy wouldn't?

PRICE $1.50 by mail postpaid.

STAGE MONEY

BIG WAD OF Phony Money

With a bunch of these bills, it is easy for a person of limited means to appear prosperous. By flashing a roll of these bills at the proper time, and peeling off a genuine bill or two from the outside of the roll, the effect created will be found to be all that can be desired. The bills are on good paper, and are same size as the small bills now current. These bills are frequently used at fairs, carnivals, bazaars and other functions. We have them in the following denominations: ONES, FIVES, TENS, TWENTIES, FIFTIES, ONE HUNDRED, and ONE THOUSAND. All one kind or assorted.

40 Bills 20c., 120 Bills 50c., 1000 Bills $3.50 ppd.

Real Live Turtles

Sent by Mail for only
25 Cents
A FASCINATING AND INTERESTING PET

If you want a fascinating and interesting little pet, just risk **25c** and we will send you a real live PET TURTLE by mail postpaid. Thousands sold at Chicago Worlds Fair. No trouble at all to keep. Just give it a little lettuce or cabbage or let it seek its own food. Extremely gentle, easily kept and live for years and years. Need less attention than any other pet. Get one or more. Study their habits. You will find them extremely interesting. **PRICE 25c Postpaid.** Specially prepared scientific Food for feeding Turtles **10c per package postpaid.**

LOOK 35¢ LOOK

Wonderful instrument.

Greatest thing yet. Nine separate articles in one. Everybody delighted with it. Odd, Curious and interesting. Lots of pleasure as well as very useful. It is a double Microscope for examining the wonders of nature. It is also an Opera Glass, a Stereoscope, a Burning Lens a Reading Glass, a Telescope, a Compass, a pocket Mirror, and a Laryngoscope—for examining eye, ear, nose and throat. It is worth all the cost to locate even one painful cinder in the eye. Folds flat and fits the pocket. Something great—you need one. Don't miss it. Sent by mail. Only 35c or 3 for $1.00.

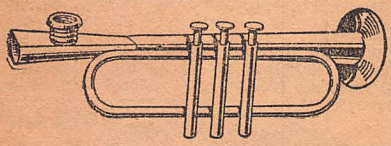
Send Orders for goods described herein to JOHNSON SMITH & CO., RACINE, WIS.

Kazoo Jazz Band Instruments

Small Size

You Can Play Them if You Can Talk!

These Instruments realize the desire of those who like the music of a military band but who have not the knowledge to enable them to play brass wind instruments. By a wonderful acoustic effect it is QUITE EASY to imitate many kinds of brass band and other instruments. Produce the sweetest, richest and most powerful tones imaginable. No knowledge of music is needed—you can play them if you can talk. FAILURE IS IMPOSSIBLE. Your first attempt will be a success, and with very little practice you will be able to imitate many instruments in a surprisingly brilliant manner. They will harmonize well with the piano, violin, ukelele, or any other instrument, and if you possess musical taste, even without technical knowledge of music, you will be delighted with the effect you can obtain. For holiday celebrations, carnivals, street parades, picnics, trolley parties and entertainments, etc., or as a rooter at Base Ball, Football or other games, they cannot be equalled.



Cornet Kazoo

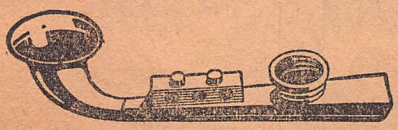
Brass finish. 11 inches long. Fitted with 3 plungers. Just sing or hum any tune. Splendid value for the money.
No. 4428. Cornet Kazoo. Price.....25c

NEW MODEL Trumpet Kazoo

Only 10c POSTPAID

Trumpet Kazoo

The old reliable and well known Trumpet Kazoo, or musical Submarine. Just the thing for parties, dances, carnivals and entertainment of any kind. Merely hum or sing any tune into it—that is all there is to it.
No. 4416. Trumpet Kazoo. Price.....10c



BABY JAZZ KAZOO SAXOPHONE

Pocket size, 6½ inches long. Brass finish. Though small it is very effective. Hum or sing any tune into it.
No. 4429. Baby Jazz Kazoo Saxophone...15c

Saxophone Kazoo

The season's biggest hit. Plays real jazz. Very melodious tone. Anyone can play it—merely hum or sing into it. 9 inches long.
No. 4430. Price...25c

Baby Jazz Kazoo Clarinet

Pocket size, 6½ inches long. Brass finish. Just hum or sing any tune into it.
No. 4431. Baby Jazz Kazoo Clarinet....15c

Slide Trombone Kazoo

Brass finish. 11 inches long, or nearly 16 inches with slide fully open. Anyone can play it. Just hum or sing into it.
No. 4432. Slide Trombone Kazoo.....25c

LEARN to PITCH real CURVES

By The World's Greatest Pitchers

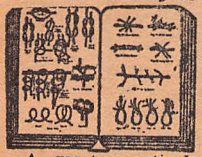
Prepares you mentally, morally and physically to become a great baseball player and a great athlete. Special course of lessons by **CHRISTY MATHEWSON**, who explains the secret of how to throw the great "**FADEAWAY**" ball, so much feared by the great batters; **ED WALSH**, the pitcher who discovered the secret of throwing that famous, mystifying, and unhitable "**SPIT BALL**"; **JOE WOOD**, the "Smoke Ball" marvel, next to the speediest pitcher in the world; **WALTER JOHNSON**, the man who has struck out more league batters in a single season than any other pitcher known; **NAP RUCKER**, inventor of the "**Knuckle Ball**"; and **DOC WHITE**, who teaches you the art of Shadow pitching by which you can develop control and speed necessary to become a star pitcher. Clearly described and illustrated by 56 pictures. Everything complete for **ONLY 25 cents postpaid anywhere.** Nothing more to buy.

PRICE 25c

New Book On

ROPE SPLICING

Useful Knots, Hitches, Splicing
How Different Knots are Made and What They are Used For



PRICE 10c POSTPAID

A most practical handbook giving complete and simple directions for making all the most useful knots, hitches, splices, rigging, etc. Shows how different knots are made and what they are used for—the use of ropes and blocks, different methods of applying them, etc. Gives a table showing the approximate efficiency of knots in a percentage of the full strength of the rope. Over 100 illustrations, including 37 Heraldic Knots. Of great value to mechanics, riggers, campers, boatmen, Boy Scouts, Army and Navy men and others. **PRICE 10c postpaid.**

SEE-O-SCOPE

Periscope—Detectoscope—Crazyscope

See over a fence, around corners, etc.

THREE DIFFERENT INSTRUMENTS IN ONE — PERISCOPE, DETECTOSCOPE, CRAZYSCOPE. The PERISCOPE permits you to see over fences, look at ball games, around corners, etc., without being seen. If in a crowd you can look over the heads of those in front of you and see all the fun. With the DETECTOSCOPE or LOOK-BACKROSCOPE you can see what is going on behind you or see who is following you without turning around. It's like having eyes in the back of your head. The CRAZY-SCOPE makes things look "crazy," for it turns everything — people, automobiles, etc., upside down. Every Boy Scout should have a SEE-O-SCOPE for spying and everyone else who wants some rare amusement. Well and strongly made. With ordinary use should last a lifetime.

See Without Being Seen

25c

Mystery Speed Boat

Sensational New Novelty

Runs for hours without mechanism of any kind. Will run several miles per hour. Kicks up the water and put-puts just like a real motor boat. A small lighted candle under pan of boat, or small supply of canned heat generates steam, making it skim over the water like a regular speed boat. Costs practically nothing to operate. Runs wherever there is water—in a bath tub, dishpan, small pond—anywhere at all. Any child can operate it. Made entirely of metal, attractively finished in colors. It is safe, fool-proof. **PRICE with supply of candles ONLY 15c postpaid.**

Magic Trick Cards

With these cards you can perform some of the most wonderful illusions. You can change eights to duces, blacks to reds, etc. The transformations are truly wonderful. **Price 10 Cents, with instructions, postpaid.**

Big novelty catalog 10c. Stamps accepted.

OUR BIG ENTERTAINER — 15c

326 Jokes and Riddles, 25 Magic Tricks, 10 Parlor Games, 73 Toasts, 13 Fairy Tales, 105 Money-making Secrets, 22 Monologues, 21 Puzzles and Problems, 5 Comic Recitations, 10 Funny Readings, 11 Parlor Pastimes, 13 Flirtations, 1110 Girls and Boys Names and their Meanings, 10 Picture Puzzles, 69 Amusing Rhymes, 37 Amusing Experiments, Deaf and Dumb Alphabet, Shadowgraphy, Gypsy Fortune Teller, How to tell Fortunes with Cards, Dice, Dominoes, Crystal, Coffee Cup, etc., Hypnotism, Ventriloquism, Cut-outs for Checkers and Chess, Dominoes, Fox and Geese, 9 Men Morris, Spanish Prison Puzzle, Games of Anagrams, 25 Card Tricks, Crystal Gazing, etc. **ALL FOR 15 CENTS POSTPAID.**

Big novelty catalog 10c. Stamps accepted.

Send Orders for goods described herein to JOHNSON SMITH & CO., RACINE, WIS.

Electric Flashlight BALLOON

The Electric Flashlight Balloon is in form of a prettily constructed and decorated paper tube, chemically treated, which, when placed upon its end upon a table, plate, shelf or the floor has a light applied to its upper edge and burns steadily and smokelessly down to the bottom, rises as a balloon to a considerable height and throws out most beautiful electric flashlights.

NO DANGER, NO DIRT, NO SMELL, NO SMOKE.

It makes a beautiful display and is very useful in contributing to the amusement at young people's gatherings. The enjoyment it offers is great, and the very low price commends it to parents desirous of contributing some novel amusement on the occasion of birthday or other children's parties.

PRICE 15c., 3 for 40c.

No. S3305. Package...15c

"SAFETY 1st" PINS

A clever novelty. The National "Safety First" Movement has made them very popular. Wear one and show your sympathy with the movement. Also handy for wearing at amateur theatricals and the like.

No. S2167. Each.....10c

Magic Transfer

A process for transferring pictures, engravings, etc., in their original colors, from newspapers, books, etc., to album or elsewhere.

Several copies may be made. Butterfly and moth wings can also be reproduced, and an instructive collection preserved in a scrap book. Process is very simple and highly interesting.

No. S3443. Package....10c

Magnifying Globoscope

Many interesting experiments may be performed with this novel Magnifying Globoscope, and all students of nature will be anxious to secure such a scientific little curiosity. All you have to do is to fill it with water, and you can then view the wonderful revelations brought to view under the powerful magnifier. You can examine tiny insects, small particles of food, etc., use it a burning glass, for magnifying small type, etc., etc.

No. S2392. Each.....10c

SQUIRT RING

You may have a lot of fun with this Sparkling Gem Squirt Ring. It consists of a handsomely plated ring, attached to a rubber ball, so arranged that the latter is quite out of view when the ring is in the proper position. Such an attractive looking ring as this cannot fail to be the center of attraction. While the victim is absorbed in getting a closer view, you just squeeze the rubber ball and the observer experiences a very great surprise.

No. S2173. Each.....15c

125 TRICKS WITH CARDS

Containing all the tricks and deceptions with cards ever invented, including the latest Tricks of the most celebrated Conjurers, Magicians and Prestidigitators popularly explained, simplified and adapted for home amusement and social entertainments. The whole so explained that any one can, with a little practice, perform the most difficult feat, to his own satisfaction and to the wonder and admiration of his friends. There is also added a Complete Exposure of all the Card Tricks made use of by Professional Card Players and Gamblers. Shows how "Skin" Gamblers cheat and win money by their infernal "palm fling," and other tricks. These features make it the best work ever published on Card Tricks.

PRICE 25c POSTPAID

No. S1174. 125 Tricks with Cards.....25c

TRICKS AND SOCIAL ENTERTAINER

Cleverly performed feats of conjuring, sleight-of-hand and illusion interest everybody, and ability of the kind always makes one a welcome guest. This is a book of 96 pages, with nearly 100 illustrations. The instructions for performing are so plainly given that even a child, with a little practice, can do them, as they only require SIMPLE APPARATUS. The book gives full and clear explanations of an unusually large number of clever tricks of all kinds, and a glance at the partial contents given below will give you a very good idea as to the comprehensive nature of this book. In addition there is a chapter on "SECOND SIGHT," a combination of five different methods which baffle the most astute investigators. The book is well worth the while even for those who merely wish to know how the tricks are done, while for the amateur magician it is a perfect treasury of golden opportunities.

PRICE 25c POSTPAID

No. S1163. Tricks and Social Entertainer....25c

INVISIBLE INK

The most confidential messages can be written with this ink, for the writing makes no mark. Cannot be seen unless you know the secret. Invaluable for many reasons. Keep your postals and other private memorandums away from prying eyes. Great fun for playing practical jokes. Only 15c a Bottle; 3 for 40c.

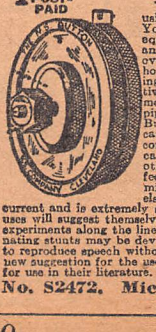
Rubber Chewing Gum

It is just like a regular package of chewing gum and looks so real that it fools everybody. Of course no one suspects it is not genuine until they start to chew it. There's a world of fun in this rubber chewing gum — 5 sticks to the package. **Price, 10c Pkg.; 3 for 25c; 12 for 75c postpaid.**

Rubber Tacks.....	Box 10c	Rubber Cigarettes.	Price per Box. 20c
Rubber Cigars.	Price Ea. 10c	Rubber Matches.	Price per Pkg. 10c

Microphone Transmitter Button

$1.00 POST-PAID



You can easily make a highly sensitive detectophone by using this Transmitter Button to collect the sound waves. You can build your own outfit without buying expensive equipment. It is simple and inexpensive. You can install an outfit in your home and hear conversations being held all over the house. You can connect up different rooms of a hotel. This outfit was used by secret service operatives during the war. It is being used on the stage. It is ultra-sensitive and is the greatest invention in micro-phones. You can mount the button almost anywhere—card board boxes, stove pipes, stiff calendars, on the wall behind a picture frame, etc. Button is so light and small it cannot be detected. Persons can be overheard without suspecting it. You can listen in on conversations in another room. A deaf person in the audience can hear the speaker. Connected to phonograph, piano or other musical instrument, music can be heard hundreds of feet away. Button may be used to renew telephone transmitters often makes an old line "talk up" when nothing else will. The ideal microphone for radio use; carries heavy current and is extremely sensitive. Amplifies radio signals. Countless other similar uses will suggest themselves. Experimenters find the Button useful for hundreds of experiments along the lines of telephones, amplifiers, loud speakers, etc. Many fascinating stunts may be devised, such as holding the button against the throat or chest to reproduce speech without sound waves. $5.00 is given to anyone who sends in a new suggestion for the use of the Button providing the manufacturers find it suitable for use in their literature. **PRICE $1.00 POSTPAID ANYWHERE.**

No. S2472. Microphone Transmitter Button.$1.00

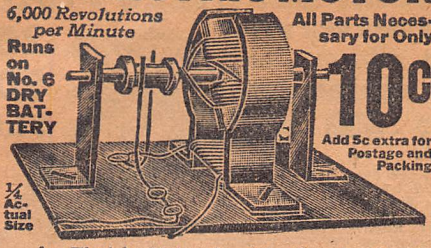
10c ELECTRIC MOTOR

6,000 Revolutions per Minute

Runs on No. 6 DRY BAT-TERY

All Parts Necessary for Only **10c**

Add 5c extra for Postage and Packing

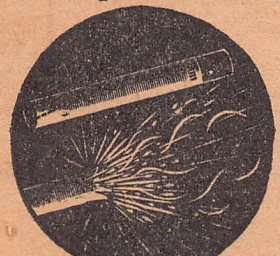


¼ Actual Size

An Electric Motor for 10c. Sounds almost unbelieveable but it is perfectly true. We send all the parts packed in a neat box, with full directions for assembling. No trouble at all putting it together—it is FUN. Takes but a few minutes. And OH BOY! Isn't it speedy! Runs on a No. 6 or similar dry battery. You can learn more about a motor in 30 minutes than by hours of study. Perform many novel and interesting experiments with it. **PRICE 10c with 5c extra for postage and packing.** No charge for postage if 3 or more are ordered.

No. 4920. ELECTRIC MOTOR. Price 10c

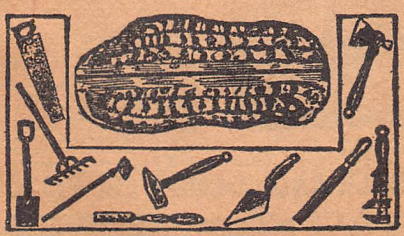
Explosion Fillers



These are small pieces of wood, like the end of a toothpick, that you can insert in cigars and cigarettes to make them explosive. They are chemically treated and after the cigar or cigarette is alight for a short time, it goes off with a loud bang to the profound astonishment of the smoker. There are 10 pieces in each package.

No. S2741. Explosion Fillers. Pkg..10c

COMPLETE Tool Set in a Nutshell



The Smallest 10-piece Tool Set in the World, made of white metal, silver finish. Set consists of 1 hatchet, 1 saw, 1 trowel, 1 chisel, 1 file, 1 hammer, 1 wrench, 1 hoe, 1 rake and 1 spade, enclosed in an imitation jumbo peanut 3 inches long.

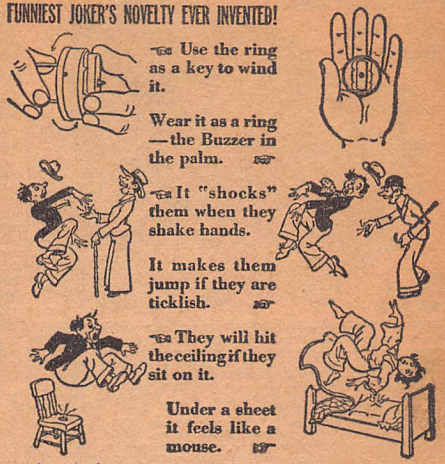
No. S5778. Tool Set in Nutshell.. 15c

3 for 40c., or $1.35 per doz. postpaid.

JOY BUZZER

(Hand Shaker and Tickler)

FUNNIEST JOKER'S NOVELTY EVER INVENTED!


Use the ring as a key to wind it.
Wear it as a ring —the Buzzer in the palm.
It "shocks" them when they shake hands.
It makes them jump if they are ticklish.
They will hit the ceiling if they sit on it.
Under a sheet it feels like a mouse.

Attached to one end of the Joy Buzzer is a brass ring that slips over the second finger, allowing the Buzzer itself to be concealed unobserved in the palm of the hand. Inside the Buzzer is a clock-work mechanism that is wound up. Projecting from the center of the Buzzer is a brass point, and a little pressure upon this point releases the mechanism. Shake hands with some one and see the shock the person receives when he unconsciously releases the mechanism of the Buzzer. If he is ticklish, watch him jump. Place it on a chair and watch the commotion when some one sits upon it. Place it under a pillow—under a sheet it feels like a mouse. You can use it as an ordinary "tic-tac" on a door or window—use it to awaken a sleeper by holding it on the sole of the foot or just behind the ear—try it on the window of an automobile just as the gears are shifted; they will think the engine is "busted." Dozens of other uses will suggest themselves to you. Made entirely of metal; you will get more than your money's worth of fun out of this little contraption.

No. S2955. JOY BUZZER. Price..... 28c

THREE SHELL GAME

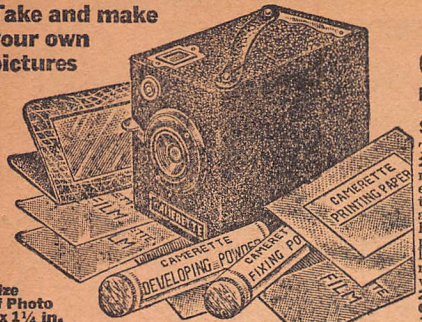
The old shell game. An old one that is always new. You can make the pea appear underneath any shell you wish, and no matter what shell is picked by a spectator he is shown to be always wrong. Watch them sit up and take notice when the little pea moves mysteriously from one shell to the other. NOTE. This trick is sold for entertainment purposes only. Complete with directions.

No. S2936. Three Shell Game.... 50c

CAMERA AND COMPLETE OUTFIT 35c

(Add 10c for postage and packing)

Take and make your own pictures



Size of Photo 2 x 1¼ in.

Although this apparatus is so **MARVELLOUSLY CHEAP,** it is quite efficient, and will take **SPLENDID PICTURES.** Just the thing for beginners in photography. It takes pictures not quite 2 x 2 1-4 inches with clearness, sharpness and distinctness. Loads in daylight. Has a **VERY GOOD LENS; BRILLIANT VIEW FINDER,** a simple yet effective **SHUTTER,** time and instantaneous, leatherette handle. Comes complete with **4 FILMS,** 1 package of **PRINTING PAPER,** a neat little **PRINTING FRAME** with glass top, and a **SUPPLY OF CHEMICALS** for developing, fixing and turning out the finished picture. Full printed instructions so plainly written that a child cannot fail to understand. Never before has such an inexpensive opportunity been offered of indulging in the fascinating art of photography. With this outfit you can take portraits of your friends, views of places of interest you may visit, and snapshots of curious events and quaint characters. The **CAMERA AND COMPLETE OUTFIT FOR ONLY 35c (Canada and foreign 50c) With 10c extra for postage and packing. EXTRA FILM 10c per package of 5 Films. EXTRA PRINTING PAPER 10c per package.**

Blank Cartridge Pistol

REVOLVER STYLE

.22 CAL.

MADE IN 3 SIZES

25c 50c $1.00

Three new models now out **25c, 50c and $1.00.** Well made and effective. Modelled on pattern of latest type of Revolver. Appearance alone enough to scare a burglar. Takes 22 Cal. Blank Cartridges obtainable everywhere. Great protection against burglars, tramps, dogs. Have it lying around without the danger attached to other revolvers. Fine for 4th July, New Years, for stage work, starting pistol, etc. **SMALL SIZE 4 in. long 25c. MEDIUM SIZE 5 in. long 50c. LARGE SIZE 6in. long $1.00. BLANK CARTRIDGES 50c per 100. HOLSTER (Cowboy type) 50c. Shipped by Express only not prepaid.**

Fortune Telling by Cards

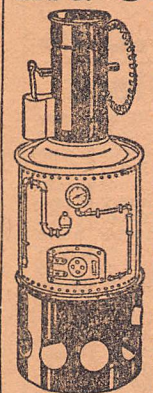
Dice, Dominoes, Crystal, etc.

Book shows how to tell fortunes with cards, dice, dominoes, crystal, etc. Tells the meaning and signification of every card. Several different methods explained and fully illustrated. Crammed full from cover to cover with complete information on fortune-telling. **PRICE 10c** postpaid. Stamps accepted.

BIG STEAM ENGINE

NEW POWERFUL MODEL JUST OUT

25c **Add 10c for postage and packing**

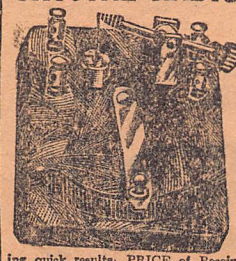


The world's biggest value in mechanical toys. A great big steam engine, measuring 7 inches in height by 2½ inches in diameter (7½ inches in circumference) for **ONLY 25 cents.** You should see it run, too. It's a revelation to see the fly wheel spin around at a great rate as soon as you "get steam up." Just light up, fill the boiler with water, and in a few minutes the engine is running at top speed. New model just out, runs on alcohol or canned heat—MORE POWER. Has fly wheel for running small mechanical toys.

Fully Tested—Guaranteed to Run

It is foolproof, harmless, fully tested and guaranteed to run. A scientific toy that illustrates the principle of the steam turbine. Runs for hours on one filling of water. Every boy should have one. Wonderfully well made—splendid value for the money. Sells for **ONLY 25c.,** with 10c extra for postage and packing. Easily worth double. *Electric Model of same Engine also available. Price 35c, postage 10c extra.*

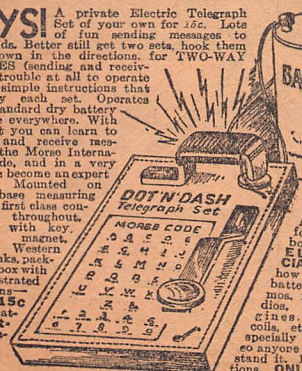
CRYSTAL RADIO RECEIVER $1.00



Say what you will about Electrical and Battery Sets, a CRYSTAL set has them all beat for simplicity and clearness of tone. There is absolutely no noise and no distortion—no batteries to buy—no tubes to wear out—no maintenance expense whatsoever. Cost nothing to operate and will last indefinitely. Reception is loud and clear. This Receiver is guaranteed to work equal to the most expensive Crystal Set you can buy. Has a receiving radius of over 25 miles, or under favorable conditions up to 100 miles. Constructed of the finest materials throughout, including supersensitive crystal, assuring quick results. PRICE of Receiver only $1.00 postpaid. Or complete with Ear Phone and Aerial Kit—everything all complete—nothing more to buy. **$2.95 postpaid. Johnson Smith & Co., Dept. Racine, Wis.**

Electric Telegraph Set 15c

BOYS! A private Electric Telegraph Set of your own for *15c.* Lots of fun sending messages to your friends. Better still get two sets, hook them up as shown in the directions, for TWO-WAY MESSAGES (sending and receiving). No trouble at all to operate with the simple instructions that accompany each set. Operates on any standard dry battery obtainable everywhere. With this outfit you can learn to transmit and receive messages by the Morse International Code, and in a very short time become an expert operator. Mounted on wooden base measuring 4 x 5 in., first class construction throughout, complete with key, sounder, magnet, miniature Western Union blanks, packed in neat box with full illustrated instructions— **ALL FOR 15c** (without battery) **postpaid.** (*Canada and Foreign 50c.*)



Add *10c* for 64 page book **"BOY ELECTRICIAN"** Tells how to make batteries, dynamos, motors, radios, bells, engines, alarms, coils, etc. Written specially for boys so anyone can understand it. 100 illustrations. **ONLY 10c.**

Novelty Catalog 10c.

Send *10c* extra for our *MAMMOTH CATALOG* of novelties, jokes, tricks, puzzles, books, etc., etc. Only catalog of its kind in existence

JOHNSON SMITH & CO.. RACINE, WIS.

SINGLE AND 100-SHOT AIR PISTOLS

Just what you've always wanted. A powerful high grade Air Pistol, shaped like an Automatic, pocket size. Fires B. B. shot obtainable anywhere. Very powerful yet perfectly safe for boys to handle. Two styles—Single Shot Pistol or Repeater. The Repeater fires 100 shots in one loading. The Single Shot Pistol shoots Air Rifle Darts in addition to B. B. Shot. Well made and durable; all metal parts nickel plated; natural grain wood stocks. Front and rear sights. Weighs about 10 ounces. Better than an air rifle. Shipped by Express. Not Prepaid.

PRICES: Single Shot Pistol . . . $2.50
100-Shot Repeating Pistol $5.00

Keep one of these safety brand new automatics in your home and be fully protected against burglars, thieves and holdup men. It's a terrible fright to wake up in the night—hear noises down stairs or in the next room—and realize your neglect has left you wholly UNPROTECTED.

Buy one of these automatics and be always fully protected. Handsome blue steel, gun-metal finish. HAS DOUBLE SAFETY and is practically "fool-proof." Accurate aim, rifled barrel, hard rubber, comfortable checkered grips, safety lever, 7 cartridges. Small, lies flat in pocket. Can be shipped by express only.

***No. S9045 is 25-calibre, 7-shot, as illustrated. Big Bargain Our Price..... $9.75**

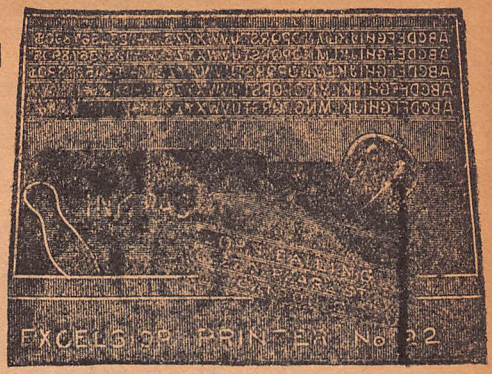
***No. S9046 is larger size, 32 calibre, military model, automatic 7-shot. Big Value, only..... $11.00**

FERNS GROWN FROM SEED

Ferns can be grown easily from seed. Fill a clean pot with fine earth. Put the pot in a saucer and immerse with boiling hot water to kill all weed, seeds or insects in the soil. After the soil has cooled, strew the fern seed over the top of the soil but do not cover it. Put a piece of glass on top of the pot, and keep the saucer full of water. Never put water on top of soil. In a short time the soil will be covered with a green moss-like growth, and in a few weeks the little fern leaves will appear.

No. S5060. Per Package..... 10c

RUBBER TYPE SET



This printer is larger than our No. 21, and contains five fonts of large type, with punctuation marks, three sets of figures from 1 to 10, three $ marks, pallet with enameled handle for holding type, ink pad in metal box with cover, and type tweezers for setting type, making a very complete outfit, with which a great variety of printing can be done. With these Printing outfits of ours a boy can combine pleasure and business printing cards, envelopes or small handbills and circulars for his companions or business associates at a profit, and at the same time learn the art of setting type and printing, which in later life may be of great value to him.

No. S2362. No. 22 Type Set.....30c

No. 23 Rubber Type Set

This is a still larger outfit as it has both capitals as well as small letters. This outfit contains no less than 266 letters, figures, punctuation marks, ornaments, spaces, etc., and comes complete in box with holder for setting 3 lines of type, tweezers and self-inking stamp pad. Size and style of type is as follows: AAAAaaaaaaBB

This is an excellent set for business or personal use.

No. 2363. Box of Rubber Type..... 50c

Junior Rubber Type Set

Complete with over 67 letters (capitals only), stops, 2-line type holder, tweezers and self-inking stamp pad. You can mark linen, books, papers, envelopes, cards, etc. As a card printer you can set up name, etc., and print 500 cards an hour. It will thus be found not only a source of profit, but also of great amusement and instruction. Size of type 3-16 inch.

No. 2361. Junior Rubber Type Outfit. 15c

SURPRISE SOAP

The fellow who unwittingly uses this soap has a very big surprise coming to him. It is an exact duplicate of an ordinary piece of soap; BUT it contains a chemical that acts like a dye as soon as it comes into contact with water. The result can be better imagined than described.

No. S2198 Surprise Soap 15c

LIBERTY AUTOMATIC REVOLVER

HIGH QUALITY - RIFLED BARREL - GOOD VALUE

With Shell-Ejecting Device
PRICE
$9.50

.22 Cal.
.32 Cal.
.38 Cal.

One of the most powerful and effective weapons made. The shots can be fired rapidly and in succession, as fast as you can count. The ideal weapon for Express Men, Bank Agents, Pay Roll Clerks, Automobilists, and all others where quick action is absolutely essential. Accidental discharge impossible. Another feature is the Automatic Shell Ejector, that throws the empty shells out when the barrel is tipped down. The Revolver is exceptionally well made of the very finest of materials and scientifically tested for accuracy. Fitted with fancy rubber handle. .22, .32, or .38 calibre, PRICE $9.50.
Cartridges for above Revolvers - by express only. .22 cal. $1.00 per 100. .32 cal., $2.50 per 100; .38 cal., $3.50 per 100.

*No. S9002. Liberty Automatic Revolver.....$9.50
(Revolvers and Cartridges unmailable)

"The Baby" Double Action Hammerless Revolver

A HANDSOME AND MOST EFFECTIVE WEAPON

$6.50

Measures but 4¼ inches long

Takes regular .22 calibre cartridges

The new Baby Double Action Hammerless Revolver has been produced to meet the ever increasing demand for a revolver that would combine small size and light weight with the essential features of Efficiency and Practicability. It is small in size, yet is just as effective and serviceable as the most expensive weapon you can buy. Every lady should have a revolver and should know how to use it, and there is no safer or better one made than this. A great feature is its safety action that guards against accidental discharge, making it quite safe for young men and ladies. The illustration gives an idea of its appearance, but it must be seen and used to be thoroughly appreciated. The ammunition used is the standard .22-calibre (short) cartridge obtainable anywhere, or you may obtain the cartridges from us (cartridges can be shipped only by express). The revolver fires six shots in one loading. The operation of the charging mechanism is extremely rapid and absolutely reliable; six well aimed shots can be fired in as many seconds. The revolver is very well constructed, with finest nickel plated fluted barrel of cylinder, and it weighs only 4½ ounces. The Price of the Baby Revolver is only $6.50.

*No. S9025. Baby Hammerless Revolver...$6.50
(Revolvers and Cartridges unmailable)

"Young America" REVOLVER

.22 & .32 Cal.

A Good Pocket Gun

A double-action revolver made in two sizes--.22 and .32 calibre. The .22 calibre revolver takes the .22 calibre rim fire cartridges - firing 7 shots at one loading. The .32 calibre gun takes S. & W. center fire cartridges and accomodates 6 shots in the cylinder at one loading. The "Young America" weighs approximately 9 ounces, and is one of the lightest weight revolvers of its type on the market. It is an excellent house arm or pocket weapon, and the most popular Fourth of July revolver. Octagon Barrel accurately rifled, made of best steel, very highly nickel plated and polished. The handle fancy hardened rubber.

*No. S9008. Young America Revolver.....$7.50

Aerial Balloon

A brightly colored balloon that measures sixteen inches long is blown up in the usual way, and, when released, the air pressure sends the balloon SOARING UPWARD, the 3½-inch propeller SPINNING AROUND AT A LIVELY RATE. The effect is startling. Price 10c each, 3 for 25c ppd.

THE BUDDY PHONE

A Real Telephone. Works Indoors or Outdoors. Though this is merely a very clever toy, it is quite as serviceable for short distances as the most elaborate apparatus made and it is much less liable to get out of order or to need adjustment; in fact it cannot be rendered inefficient unless roughly handled. No troublesome battery, no intricate "hook-up." Can be put to practical use from one room to another, up or down stairs, around corners, etc. The patented sounding discs transmit and receive the voice perfectly, making it a really practical talking telephone. Set consists of two phones, transmission cord and full instructions. Price only 65c per set postpaid.

WONDERFUL X-RAY TUBE

A wonderful little instrument producing optical illusions both surprising and startling. With it you can see what is apparently the bones of your fingers, the lead in a lead pencil, the interior opening in a pipe stem, and many other similar illusions. Price 10c, 3 for 25c.

Exploding Matches

10c

More fun than fighting with your wife. They look just like ordinary matches but explode with a loud bang when lit. 12 matches to a box. PRICE 10c per box, 3 boxes 25c, or 75c per doz. boxes. Not mailable. Shipped by Express only.

ITCHING Powder

This is another good practical joke; the intense discomfiture of your victims to everyone but themselves is thoroughly enjoyable. All that is necessary to start the ball rolling is to deposit a little of the powder on a person's hand and the powder can be relied upon to do the rest. The result is a vigorous scratch, then some more scratch, and still some more. 10c box, 3 boxes for 25c or 75c per dozen. Shipped by Express.

ANARCHIST BOMBS

One of these glass vials dropped in a room full of people will cause more consternation than a limburger cheese. The smell entirely disappears in a short time. 10c. per Box, 3 Boxes for 25c., 75c per doz. Boxes, or $7.50 per gross Boxes. Shipped only by Express.

SNEEZING POWDER

Place a very small amount of this powder on the back of your hand and blow it into the air, and watch the sneeze without knowing the reason why. It is most amazing to hear their remarks, as they never suspect the real source, but think they have caught it one from another. Between the laughing and sneezing you yourself will be having the time of your life. For *parties, political meetings, car rides*, or any place at all where there is a gathering of people, it is the *greatest joke*.

PRICE 10c, 3 for 25c, 75c per dozen. Shipped by Express.

COMICAL MOTTO RINGS

Lots of harmless fun and amusement wearing these rings. Made in platinoid finish (looks like platinum), with wording on enameloid, as illustrated. Price 25c. ea./Postpaid.

250 MAGIC TRICKS

An excellent little book containing 250 Parlor Tricks, tricks with cards, coins, handkerchiefs, eggs, rings, glasses, etc. So simple that a child can perform them. Profusely illus. Sent postpd. to any address for only 10c, 2 copies for 25c postpaid.

PRICE 10 CENTS

THE FAN DANCE

HIT *of the* CENTURY *of* PROGRESS

Who will forget the famous FAN DANCE episode of the Century of Progress Exposition in Chicago? Here it is humorously, cleanly presented in vest pocket form. You flip the pages and **HOTSY TOTSY** comes to life and whirls through her dance, provoking not a sly smile, but a wholesome laugh from all, even the most fastidious. It is a most innocent fun maker that will cause you and your friends no end of fun and amusement. **HOTSY TOTSY the FAN DANCER** measures only 2 x 3 inches – 6 square inches of spicy, piquant entertainment for one and all. **PRICE 10c.** Add 3c for postage. *Big Catalog* **10c.**

Johnson Smith & Co., Racine, Wis.

A LAUGH ON THE GIRLS

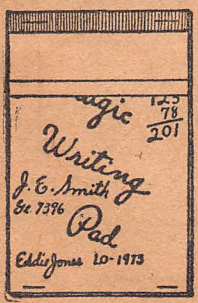
Merry Widow Hanky

IT'S CERTAINLY

"The Cat's Pajamas"

The girls get curious about the ruffles on the handkerchief showing from your pocket. They think you have other loves, but when they investigate the hanky, Ah! It is not a handkerchief at all but something else indeed! It is, as a matter of fact, a perfect, though miniature model of the most necessary lingerie garment worn by the ladies that, when folded up and worn in the pocket, has the appearance of a gentleman's handkerchief. **PRICE ONLY 15 CENTS BY MAIL POSTPAID TO ANY ADDRESS.** Add 10 cents for a copy of our **BIG CATALOG,** listing thousands of other jokes, novelties, tricks, puzzles, books, etc.

Magic Writing Pad

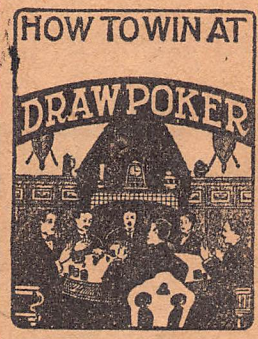


You write with the first attainable object, such as a pencil, tooth-pick, your finger nail—anything at all, for you are not writing on paper but on transparent celluloid. The writing DISAPPEARS immediately on raising the inner part of the tablet. The tablet can be used over and over again, almost indefinitely—it is practically everlasting. Has hundreds of uses—for memorandums, for figuring, estimating, makes an ideal Bridge score pad. It is thoroughly practical as well as novel. Measures 6¼x4¼ inches—convenient for pocket. Price 15c, 3 for 40c ppd.

Big novelty catalog 10c. Stamps accepted.

HOW TO WIN AT POKER

An Expose of the Tricks and Deceptions Practiced by PROFESSIONAL GAMBLERS



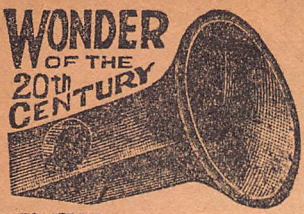
This book is written by a retired card sharper and it tells how to win at draw poker. It contains all the needed instruction in this distinctly American game. The rules are so clear that they require no effort to understand, and the student may confidently **trust** himself to its guidance. **Explains** the different varieties of poker such as Straight Poker, **Stud Poker,** Whiskey Poker, Mistigris, The Freeze-out, The Widow or Kitty, Buck, Jack-Pots, etc. Gives the prospective value of each hand before and after the Draw—the true method of discarding and drawing, with a thorough analysis and insight of all aspects of the game. It tells how gamblers win at poker, and exposes the methods used by card sharpers at different forms of the game, including the following: Straight Poker, Draw Poker, Twenty-Deck Poker, Brag, The Square Game, Top Stock, Bottom Stock, Jog Stock, Palm Stock, Running up two hands, Flushes, Fulls and Fours, Strippers, Briefs, "Second" Dealing, Bottom Dealing, Crimping, Cold Decks, Holding out, False shuffles, False Cuts, Shifting the Cut, Convexes and Reflectors, Stocking for a Draft, Double Discard, Running up Hands, etc., etc. Also an explanation of Marked Cards, known in gambling parlance as "paper." The book has 13 chapters and contains a vast amount of information that may save you from being fleeced by crooked players and gamblers.

No. 1045. PRICE POSTPAID..... 10c

Big novelty catalog 10c. Stamps accepted.

Send Orders for goods described herein to JOHNSON SMITH & CO., RACINE, WIS.

Seebackroscope



AN OPTICAL CURIOSITY

See what is going on behind you.

With the See-Back-Roscope you can see behind without turning your head. It is like having **EYES IN THE BACK OF YOUR HEAD**, and when people do not know you are looking, you see some interesting sights sometimes. The instrument is made of hard rubber and is placed over the eye in much the same way as the magnifying glasses used by jewelers and watch repairers. Persons are often anxious to see who is following them without attracting attention by turning around, and this instrument does the work for you. If you fear your best girl is flirting with the other fellow, place the Seebackroscope to your eye when she thinks you are not looking. **PRICE 15 CENTS**

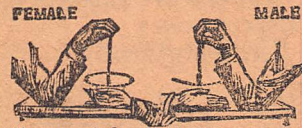
DAISY WATER PISTOL

25c Post-paid

The Daisy 6 Shot Repeating Water Pistol is the very latest design in Water Guns, patterned after the latest type of Police revolvers. It is made from steel, with blued finish. Very simple to load and discharge. No rubber bulb to get out of order. Great sport for boys and girls, as it throws a fine stream of water a distance of 25 feet. When diluted ammonia is used, it makes a very effective weapon against vicious men and animals. Measures 7 inches in length, and weighs over 6 ounces.

PRICE 25 CENTS POSTPAID.

SEX INDICATOR



An amusing and entertaining novelty. Hold it over a woman's hand and it is supposed to describe a complete and continuous circle. Hold it over a man's hand and watch it move back and forth like a pendulum. We have made innumerable tests, and while we have never been able to figure out how it's done, we have never seen it fail. Many novel and interesting experiments may be performed with it. Try it for testing the sex of animals, cats, dogs, rabbits, butterflies, etc. Sold as a patent egg tester in Europe.

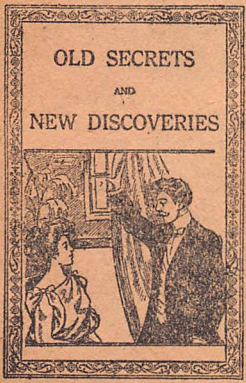
PRICE, 10c each, 3 for 25c.

Big novelty catalog 10c. Stamps accepted.

Old Secrets and New Discoveries

"THE TREASURE CASKET OF MYSTERIES"

Containing information of rare value for all classes, in all conditions of society. The following is a summary of its contents:



IT TELLS all about Electrical Psychology, showing how to hypnotize any person, and make him, while under the influence, do anything you may wish him to do, no matter how ridiculous it may be, for he cannot help doing it.

IT TELLS how to Mesmerize. Knowing this you can place any person in a mesmeric sleep, and then be able to do with him as you will. This secret has been sold over and over again for $10.

IT TELLS how to make a person at a distance think of you—something that all lovers should know.

IT TELLS how to charm those you meet and make them love you, whether they will or not.

IT TELLS how spiritualists and others can make writing appear on the arm in blood characters, as performed by Foster and all the noted magicians.

IT TELLS how to plate and gild without a battery; how to make a clock for 25 cents; how to banish and prevent mosquitoes from biting; how to make cologne water; artificial honey; how to make large noses small; to cure drunkenness; to copy letters without a press; to obtain fresh-blown flowers in Winter; how to make a quart of ink for a dime; how to make different kinds of soap, ink, cements, polishes, glues, perfumery, face paints, etc.; how to make different kinds of candy.

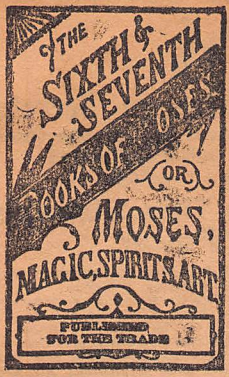
IT TELLS how to make a horse appear as though he were badly foundered; to make a horse temporarily lame; how to make him stand by his food and not eat it; how to cure a horse from crib or sucking wind; how to make a young countenance on a horse; how to cover up the heaves; how to make him appear as if he had the glanders; how to make a true-pulling horse balk; how to nerve a horse that is lame, etc. These horse secrets are being continually sold at $1 each.

IT TELLS how to make the eggs of Pharaoh's serpents, from which, when lighted, though but the size of a pea, there issues a coiling, hissing serpent, wonderful in length and similar to a genuine serpent.

The book contains all the above and dozens of other valuable secrets. **PRICE ONLY 10 CENTS POSTPAID.** An enlarged edition of the same book is also published, containing 164 pages of secrets and golden money-making opportunities for everybody. **PRICE 35 CENTS, POSTPAID.**

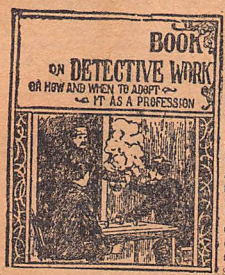
Send Orders for goods described herein to JOHNSON SMITH & CO., RACINE, WIS.

6-7th BOOKS OF MOSES



This rare and remarkable book, translated word for word into the English language, is now obtainable in a popular edition. It contains exact copies of over a hundred seals, signs, emblems, etc., said to have been used by Moses, Aaron, the Israelites, Egyptians, etc., in their astonishing magical and other arts, including the period of time covered by the Old and New Testaments. This wonderful translation is of great importance to the Christian, Deist, Jew or Gentile, Episcopalian or Roman Catholic, and dissenters of every denomination. The extracts from the old and rare Mosaic Books of the Talmud and Cabala are invaluable. The book deals at great length with the well known magic of the Israelites, and concludes with a chapter dealing with Astrological influence upon man and the magical cures of the Old Hebrews from Dr. Gideon Brechee's work, "The Transcendental, Magic and Magical Healing Art in the Talmud." The numerous engravings contained in the book are said to be exact copies of those used by the Israelites and Egyptians to accomplish the designs for good or evil. The book contains nearly 200 pages and is sold by us at **HALF THE PUBLISHED PRICE,** or **50 CENTS POSTPAID. Also obtainable with cloth binding for $1.00 POSTPAID.**

LEARN to be a DETECTIVE



This book of 100 pages tells how. Written by an expert detective, formerly a Pinkerton chief of staff. Contains full information and how to become an adept detective. Gives the necessary requisites, tells all about shadows and shadowing, "piping," "roping," secret and open investigations, deductions, the sweat box, extraditions and requisitions, rewards, etc.

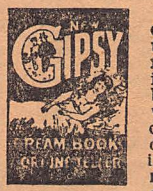
No. 1368. Book On Detective Work . . 25c

FORTUNE TELLING CARDS

Each card is illustrated with pictures, signs and symbols of prophecies foretelling the different events of life, and every one will find them adapted to his or her particular case. With these wonderful cards in your possession you can completely mystify and amaze your friends. They will be so astonished at your cleverness that they will think you are in league with some secret power. Fortune telling in some form or another has existed from time immemorial. Mme. Le Normand, the celebrated Sybil, has left us with a very favorable opinion of her rare talent, and we believe we render a service to the admirers of her system by publishing the cards which were found among her effects after her death. With these cards she prophesied to Emperor Napoleon I his future greatness, and foretold the misfortunes and downfall of many princes and great men of France.

No. 3621. Fortune Telling Cards . . . 35c

Tell Your Own Fortune



With the aid of this dream book and fortune-teller. The key to your future. Will you be lucky in love? Successful in business? Will you be wealthy? Complete with dictionary of dreams with descriptions and correct interpretations, with lucky numbers, fortunate days, oracles, divination, palmistry, etc. Also tells how to tell fortunes by various methods, by grounds of coffee or tea, by dominoes, by marks, scars or moles, miscellaneous games with cards, lucky days, weeks, months, years; how to receive oracles by dreams, finger nail observations, etc.

No. 1769. Gypsy Fortune Teller . . . 10c

The 5-Minute Harmonica Course

A New Easy Self-Teaching Method

The Harmonica, when well played upon, is an instrument that furnishes splendid entertainment and amusement at parties, school, college, etc., and is popular with everyone. Public Schools, Boy Scout Organizations, Y. M. C. A. Clubs, Sunday School and other church organizations are now organizing Harmonica Orchestras. If you want to learn to play the Harmonica quickly, easily and correctly, here is a simplified Self-Teacher that you have been waiting for. Explains how to hold the Harmonica—How to stand when playing—Manner of playing when seated—How to place the Harmonica in the Mouth—How to play the notes of the scale—How to use the tongue—How to produce the Tremolo—How to obtain a rich, mellow tone, etc. In addition a number of well known popular tunes are given with notes correctly numbered so that anyone can play them. Everything is explained and illustrated in the most simple manner, so that the Harmonica can be mastered in 5 minutes if the directions are followed.

No. 1623. The 5-Minute Harmonica Course. Price Postpaid ---------- 15c

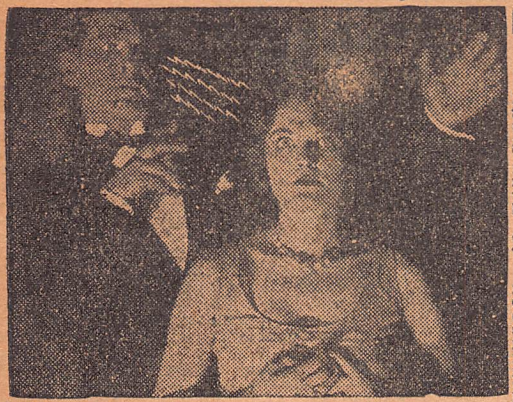
Send Orders for goods described herein to JOHNSON SMITH & CO., RACINE, WIS.

This Book Will Teach YOU The Secrets of

HYPNOTISM

See How Easily You Can Master These Strange Secrets

This book shows you in a few hours how to use the strange, mysterious power of hypnotism to influence the thoughts of others, control their desires, and make you master of every situation.



Master This Strange Power

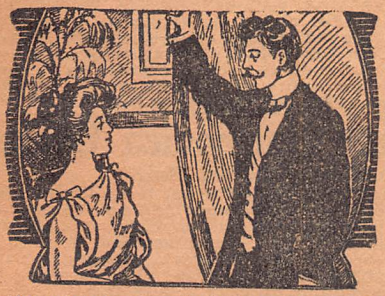
There is nothing uncanny, weird or malign about the amazing power of hypnotism! Everyone has concealed in their make-up the germ of this mysterious power. All you need to do is to train it properly. Then, when this mighty power is revealed, you can overcome all obstacles, you can make people obey your commands, you can use this power to gain popularity, success, big money.

Sway Others At Will

When you have this marvelous power at your command, you can work wonders. You can make others love you; strengthen your own will-power; develop a magnetic personality; banish fear and worry; improve your memory; overcome bad habits; realize your ambitions; increase your salary. If you have an average active and intelligent mind, you can easily learn the secrets of Hypnotism.

All is now revealed in a wonderful new book by Prof. Alpheus, a world-famous hypnotist. In simple, easy-to-understand language, Prof. Alpheus explains the theory and practice of hypnotism—how to master this power—how to hypnotize at a glance—how to make others obey your commands—how to overcome bad habits—how to awaken a subject—how to hypnotize animals, and scores of other secrets. Prepared especially for self-instruction. This book will give you new power, confidence and a dominating personality. It casts aside the veil that has hidden hypnotism from the eyes of the world, and this mysterious domain is explored in such a manner as to bring this great boon to humanity into an exact science. Barriers have been thrust aside and this great knowledge has been grasped from the hands of those who wished to keep it from the people. The original edition of this book sold for $2.50, but it has now been published in a low priced paper covered edition that sells for **Only 25 Cents Postpaid.**

BOOK ON PRACTICAL HYPNOTISM



Although not a large book, it contains as much information, if not more, on the subject of Hypnotism than many books selling for several times the price. Here is a brief summary of the contents: Hypnotism—Theories regarding Hypnotism—Suggestion—Dangers of Hypnotism—Hypnotism for Scientific Practice—Uses of Hypnotism—How to Hypnotize—How to make a subject fall backward or forward—How to clasp the hands together—To cause a subject to forget his name—To make his leg stiff—How to produce sleep—Hypnotizing instantaneously—How to awaken a subject—Illusions and Hallucinations—The use of Hypnotism in diseases—Hypnotizing animals, etc. **PRICE 10 CENTS**

25 LESSONS IN HYPNOTISM

Do you realize the Hypnotic Power that lies dormant in YOU?

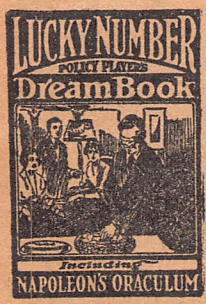
LEARN THE SECRETS OF THIS MYSTIC POWER. Hypnotism is a strange, subtle power that gives you the key to the Inner Secrets of Mind Control. When this mighty power is released, you can overcome all obstacles, make people obey your commands, strengthen your memory, develop a strong, magnetic personality, realize your ambitions, banish fear and worry, and become master of yourself, friends and acquaintances—either sex. This marvelous book is perhaps the most perfect, complete, easily learned and comprehensive course in the world. 25 lessons embracing the science of magnetic healing, telepathy, mind reading, clairvoyant hypnosis, mesmerizing, animal magnetism, thought transference, personal magnetism and kindred sciences. Tells how to hypnotize by several different methods, how to hypnotize by telephone, how to hypnotize yourself, how to cure bad habits by hypnotism, how to hypnotize instantaneously, how to hypnotize a room full of people at one time, how to give a complete hypnotic entertainment (50 original and amusing experiments), how to put your subject into a six-days' trance, how to make money out of hypnotism, etc. Truly a most remarkable book. **PRICE ONLY 10 CENTS POSTPAID.**

Send Orders for goods described herein to JOHNSON SMITH & CO., RACINE, WIS.

How to LOVE and be LOVED

Every normal being is at some period of his or her existence susceptible to love's tender passion. When love's young dream comes to youth or maid the lovers in despair realize how inadequate is the language at their command to express the depths of the consuming passion that is gnawing at their hearts. It is at such ecstatic periods that lovers crave for some book that will put them in touch with all that the world's great men have sung, said and written. It is to soothe the souls of the love-lorn that this work has been compiled. This brief summary of a few of the chapters will give you some idea of the comprehensive nature of the book: How to know that you are really in love—First love—How to begin a courtship—How to choose a husband or wife—Disqualifications—Words of wisdom—Ways and means—Suitable age for marriage—How to woo and how to win—First advances—Courting a lively girl—A domesticated girl—A prudish girl—A proud girl—The fascinating widow—How to make a man propose—How to catch a rich bachelor—"Popping the question"—The engagement—Rejection—The girl men like—Bashfulness—Love as a disease—Secret love—Love's awakening—How to kiss—Love in fiction—Matrimonial suggestions—The man flirt—A maiden's incantation—A few don'ts—Cynicisms—Handkerchief, glove and postage stamp flirtations—Celebrated lovers—The bachelor's progress—Wedding anniversaries—Quaint marriage customs—An old maid's experiences—Proverbial philosophy—Signification of gems, etc., etc. There is a surprisingly large amount of information contained in this book, more, indeed, than you will find in many books selling at several times the price. **PRICE ONLY 10 CENTS POSTPAID.**

Lucky Number Dream Book



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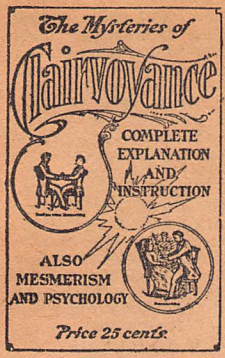

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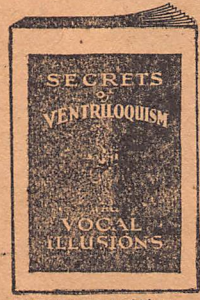

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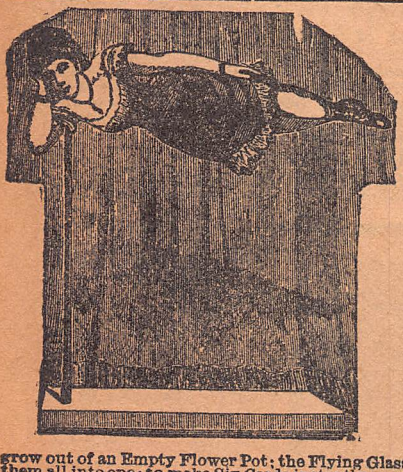

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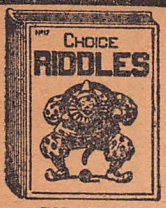

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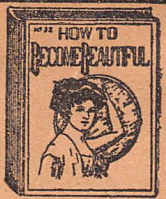

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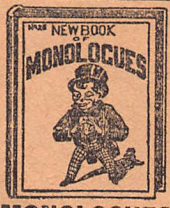

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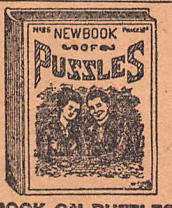

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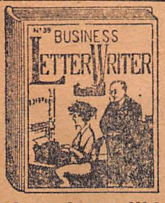

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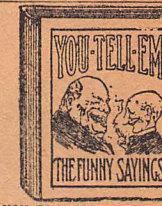

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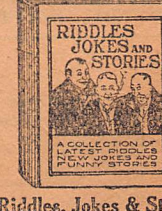

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A splendid collection of the latest riddles and conundrums, new jokes and excruciatingly funny stories.
No. 1955. PRICE **10c**

WEIRD MYSTO LUCKY RINGS

LUCKY SHEIK RING

Why not have Good Luck in Love — the greatest thing in the world. The Sheik, the world's most famous lover, the outstanding hero of gorgeous Arabian Nights, conquers love. Amazing stories are being told of good luck in love by prominent wearers. Get this Arabian Sheik Ring of unique design and unusual beauty. Green gold finish, serpents set with Lucky Mysto Ruby and Emerald.

No. 8243. THE LUCKY SHEIK RING. PRICE POSTPAID.....49c

KING TUT LUCKY RING

This ring of Egyptian ancient art design, is said to ward off evil spirits, sickness, spells, etc., and, according to Ancient Belief, to bring Success to the wearer in love, business, games, and All Undertakings. Do you DESIRE LOVE? MARRIAGE? CHILDREN? MONEY? POWER? LIFE? LUCK? Have you enemies? Then wear this Ring—A beautiful reproduction of the ring used by the mighty Pharoh-Tutankahmen, whose 3300-year treasure tomb has just been opened. Made of green gold, antique finish.

NO. 8239 KING TUT LUCKY RING....$0.59

SKULL AND CROSSBONES RING

Very uncommon, unique. Silverine finish, with two brilliant flashing gems sparkling out of the eyes. One of the most popular Good Luck Rings we sell. Said to bring Good Luck to the wearer.

Wear this ring and be lucky in love, business etc. Its unique design also makes it popular as an emblem for members of clubs, classes, seceret societies, etc.

No. 8234 Skull & Crossbones Ring...25c

EGYPTIAN LUCKY RING

Or SACRED SCARAB RING. Fame—Fortune—Happiness—Success in Love and Business— are said by many men and women to have come to them with this LUCKY RING. Sterling silver finish.

No. 8242 EGYPTIAN LUCKY RING..$0.25

Crucifix Ring

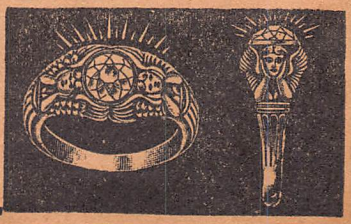
The ring was first made during the 15th century by a Spanish Goldsmith and won immediate favor. It was valued highly, and and was handed down from father to son. Its fame has increased during the centuries and it is today the most sought after and treasured guard ring. This beautiful ring is a masterpiece of the jeweler's art. Lovely satin oxidized finish. Guaranteed for 10 years. Advertised and sold in stores at from $1 to $5.

No. S8282. Crucifix Ring. Price 25c

CLEOPATRA LUCKY RING

Egyptian Karat Diamond Ring. Sterling Platinum finish. Mystic symbol of good luck, love, business and health. Believed to ward off evil spirits, sickness. misfortune. Thousands say it brought them success. The stone is our famous Egyptian diamond. If you can tell it from a genuine diamond, send it back.

No. 8241. Cleopatra Lucky Ring. Price Postpaid $1.00



Send Orders for goods described herein to JOHNSON SMITH & CO., RACINE, WIS.

NEW VEST POCKET ADDING MACHINE

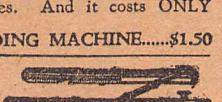
Guaranteed 5 Years

Adds, Subtracts, Multiplies, Divides

Costs only $1.50, yet does the work of a $300 machine. NOT A TOY, but a real adding machine that every one should carry. Without question the simplest and most efficient machine of its kind made. No complicated mechanism to get out of order. Constructed of steel, ensuring strength, durability and reliability. Guaranteed for 5 years. Lasts a lifetime. Compact and light. Weight 7 ounces. Will fit right in vest pocket and can be carried about without inconvenience. Size 3x5¾ inches. Adds up to 9,999,999, or in dollars and cents up to $99,999.99 which is one cent less than one hundred thousand dollars. No keys to punch and no lever to pull. Total always visible and can be re-set to zero in a moment. Easy to operate. A mere novice can put the machine into use immediately. Positively the lowest priced practical portable Calculator made. Remember it adds, subtracts, multiplies, divides. And it costs ONLY $1.50 postage paid.

No. S2376. VEST POCKET ADDING MACHINE.....$1.50

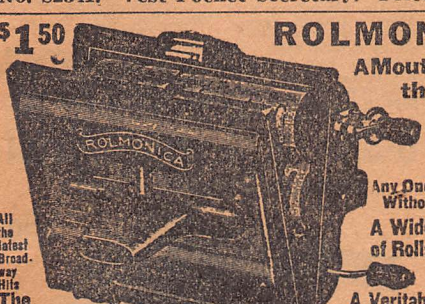
Vest Pocket SECRETARY



MARVELOUS COMBINATION, Not a toy, but a really useful article you need every day. 12 Articles in one—Pen, Pencil, Paper Knife, Ink Eraser, 4-inch Rule (divided into sixteenths), Compass (can be set for any size circle), Envelope Opener, Mechanics' Marking Point, Pencil Sharpener, etc. Made entirely of steel, nickel-plated. Folds up into a small space occupying no more room than an ordinary pencil in the pocket. Price 19c.

No. S2341. Vest Pocket Secretary. Price....19c

$1.50



ROLMONICA

A Mouth Organ that Plays with a Music Roll

Any One Can Play It Without Practice

A Wide Selection of Rolls to Choose From

A Veritable Pocket Size Jazz-Band!

All the latest Broadway Hits

The Pocket Player Piano

Rolmonica is an automatic harmonica, that plays a music roll just like a player piano. It is a whole brass band all in one—the biggest sensation of the musical world in the last few years. Anyone can play it, for all you have to do is to insert a roll, and turn the handle while you blow. That is all there is to it. Nothing could be simpler. Any child who can do these two simple things can play the Rolmonica. It is a veritable pocket size Jazz-band, combining the principles of the harmonica and the player piano. It is an instrument of a thousand melodies, it plays the popular airs of the past, as well as the latest Broadway hits. There are hundreds of rolls to select from, such as My Blue Heaven, Home Sweet Home, America, Old Black Joe, Annie Laurie, Sidewalks of New York, Humoresque, Wild Irish Rose, Rosie O'Grady, Among My Souvenirs, Love's Old Sweet Song, Dixie, Mighty Lak' a Rose, Aloha Oe, Ramona, Juanita, Rose Marie, Onward Christian Soldiers, Sally of My Dreams, Carolina Moon, I Faw Down & Go Boom, Weary River, Over There, Ma Cherie, Long Way to Tipperary, Make Believe, Desert Song, La Paloma, Sweet Adaline, I've Got a Feeling, Pagan Love Song, When My Dreams Come True, Parade of Wooden Soldiers, Land of Sleepy Water, Turkey in Straw, Hail the Gang's All Here, and hundreds of others. An unfailing source of amusement. You can delight your friends for hours and play tune after tune simply by changing rolls. Small in size, fitting your pocket, yet mighty in its finger-tickling, toe-tingling tune power. Not a toy, but a genuine musical instrument and the life of any party. One Roll free with each Rolmonica. Extra Rolls always obtainable; complete list with each instrument. New Rolls added each month. **PRICE with 1 Roll $1.50; Extra Rolls 10c each, all postpaid.**

No. S4470. Rolmonica with 1 Roll.....$1.50

100 Gold Eyed Needles

The superiority of the Golden Eyed Needles has never been questioned and we show here a full package containing one hundred GENUINE GOLD EYED Needles. They are made of the very best machine steel, warranted not to break, and are put up in assorted sizes, 4, 5, 6, 7 and 8. The regular selling price of these Needles is 50 cents, which is what they would cost elsewhere, but by a special arrangement with the manufacturers, we are enabled to offer them to our customers for the reduced price of ONLY

No. S2401. Package.....10c

Potmend

Mends Ironware, Agate-ware, kettles, pots, pans, boilers, tin, copper, aluminum, ice boxes, iron pipes, cracks in stoves, broken china, porcelain, bric-a-brac, bisque, crockery, woodenware, marble, etc. Comes in powdered form. Just mix with water and apply. HARDENS LIKE IRON. Mends a big hole or a small crack. PRICE 15c, 3 for 40c, postpaid.

No. S4050. Package....15c

Ink Erasing Fluid

Better and more effective than Rubber Erasers. Simply dip reverse end of penholder in fluid and apply to the blot or error. The fluid absorbs the ink, then dry off with blotting paper, and the thing is done, leaving no trace of the blot. Of special value for thin paper.

No. S4029. Bottle.....15c

SQUIRT ROSE 25c

A REAL STARTLER. This is the most popular of all squirt tricks. The flower in your coat looks so fresh and sweet that everyone is tempted to inhale the delightful perfume. Then is the moment to press the bulb. Geewhillikens! Don't they jump? There is a very long rubber tube that easily reaches to the pocket of your coat or trousers, and the bulb is large enough to make a dozen shots with one loading. **PRICE 25c each, or 3 for 65c postpaid.**

No. S2023. Each.....25c

NOVELTY BADGES

Kissing Permit 10c *Garter Inspector 10c*

Two very novel metal badges, nickel plated, that you can wear, giving you fun out of all proportion to their trifling cost. **10c, each badge, 3 for 25c, or 75c per doz. postpaid anywhere.**

S2014. Kissing Permit..10c
SX2013. Garter Inspector.10c

PEA-MATIC REPEATER-12 SHOT

25c Postpaid.

Here it is, boys. You can have an immense amount of fun with this new pistol. It shoots 12 to 15 ordinary peas without reloading. All you need do is to load the gun with peas, pull the trigger and keep on firing until the barrel is empty. Then reload and fire again. It is absolutely harmless and safe. Nothing to explode. These pistols sell like hot cakes, so get yours AT ONCE. Be the first boy in your town to own one of these automatic repeating pistols and be the envy of all the other kids in the neighborhood. Remember, unlike most other guns, it costs practically nothing for ammunition. Just go into the kitchen and help yourself. The pistol is well and strongly made, patterned after the style of an automatic, and with ordinary use will give many years of satisfactory service.

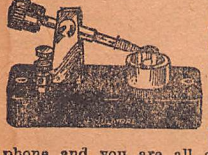
No. 7481. PEA-MATIC 12-SHOT REPEATER. Price Postpaid..... 25c

DISSOLVING VIEWS

You may have a lot of fun with this little peep-show. It is a regular starter. It is made entirely of metal and consists of a tube having a miscroscopic lens fitted into one end. While the victim is absorbed in admiration of the pretty picture, and turns the button in the confident expectation of seeing something interesting, a spring syringe is brought into action, and the observer experiences a very great surprise. **PRICE 50 Cents Postpaid.**

Crystal Radio Detector

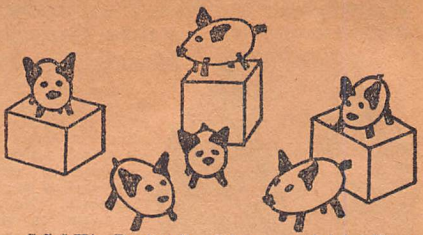
COMPLETE WITH CRYSTAL 35 CENTS



This Detector is practically a radio in itself, as it is possible to get reception with it alone, provided you are within 25 miles of a broadcasting station (or up to 100 miles under very favorable conditions). All you need is an aerial and an ear phone and you are all set. It is completely assembled and wired, all ready for use. It has two posts, making connection much easier, also making it possible to make changes quickly. Everything complete, including the stand, crystal cup, arm with catswhisker and necessary screws, an ultra sensitive crystal of the finest grade, two terminals for wire connections, mounted on handsome base—**EVERYTHING COMPLETE FOR ONLY 35 CENTS POSTPAID.** Every set tested a reception positively guaranteed.

THE MYSTERY MOVIE PIG

What Makes It Move?

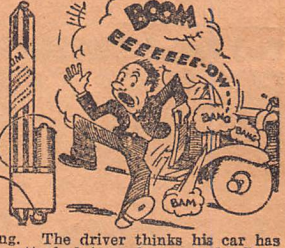


S-S-S-H! Don't tell. It's a secret! ! ! ! Every one baffled as to how it works or why the little pig winks its eyes, wiggles its ears and nose, or wags its tail. But YOU know, for all you have to do is to catch a good lively fly or bug and put him inside, and then the fun begins. Put in two or three—the more the merrier. Let them out at night to have their dinner and exercises and get more lively ones in the morning. But don't tell the secret. Keep them guessing. For there is no machinery inside and it is NOT electricity, NOT air, NOT radio, NOT water, NOT vibration. More fun than a barrel of monkeys.

No. 2899. MYSTERY MOVIE PIG. Price. 25c

Auto Scare Bomb

The Auto Bomb is attached to the motor of your car, fastening one wire to the spark plug terminal and the other wire to any part of the motor to serve as a ground. The instant your "victim" steps on the starter, there is a shrill whistle, followed by a loud bang. The driver thinks his car has exploded. Can be attached in a few seconds. Does not harm the car. Gives you more protection than an insurance policy—catches the thief in the act.



PRICE 15c Each, 3 for 40c. Shipped By Express

6-Shot Repeating Pistol

SHOOTS RUBBER BANDS

25c

BREAK OPEN TYPE

Just like Real Revolver

For a toy revolver, this is a splendid imitation of the real thing. At first glance it might easily be taken for a regular revolver. It is a **FULL SIZE WEAPON**, well made, with blue steel baked enamel finish. It fires from 6 to 8 rubber bands in rapid succession, as fast as you can pull the trigger. It breaks open in the middle just like an expensive revolver. Measures 8 inches long, with 3-inch barrel. Strongly made of 20 gauge steel. Looks exactly like a real gun and clicks like one when fired. A supply of rubber bands given with each gun. Packed in individual carton complete with directions. **PRICE 25 CENTS BY MAIL. POSTPAID.**

Send Orders for goods described herein to JOHNSON SMITH & CO., RACINE, WIS.

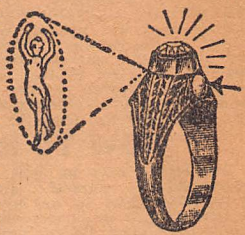
Solar Telescope

The new Excelsior Solar Telescope is a large and serviceable instrument, nicely made and accurately fitted. When extended it is almost three feet in length, and when closed measures not quite twelve inches in length. Telescopes of this size usually sell for many times this price, but by importing them direct from a large European manufacturer, we are enabled to offer them to our customers for ONLY $1.25 each, at which price they ought to sell readily. The lenses are well made, the sides are brass bound, and the four sections are perfectly fitted. Here is your chance to obtain a Telescope for a nominal sum. It will be sent postpaid to any address upon receipt of amount in any convenient form. Postage stamps accepted if more convenient.

No. S9110. EXCELSIOR SOLAR TELESCOPE. Price Postpaid..... $1.25

Novelty French Ring with View

A VERY GREAT CURIOSITY



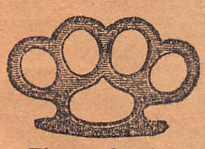
Here is a very great novelty in Rings, that is selling in thousands. It is a nicely made ring, finished in imitation platinum, and set with a large imitation diamond. It looks just like an ordinary ring, but in the shank of the ring is a small microscopic picture almost invisible to the naked eye, yet is magnified to an almost incredible degree and with astonishing clearness. There is quite an assortment of pictures that should suit all tastes. Some are pictures of bathing girl beauties, pretty French Actresses, etc., others are views of places of interest in France, Panama Canal and elsewhere; others show the Lord's Prayer in type, every word of which can be read by persons with normal eyesight. They are interesting without being in any way objectionable.

No. S322. NOVELTY FRENCH RING. Price Postpaid 25c

Three for 65 cents, or a dozen for $2.25 by mail postpaid

Silent Defender

or Aluminum Gloves



These aluminum Gloves are used by Police Officers, Detectives, Sheriffs, Night Watchmen, and others, as a means of self protection, and they are certainly effective. They easily fit the hand, the fingers being placed in the four holes, thus tightly grasping the Glove. Very useful in an emergency. Made of aluminum, highly polished, they are very light, weighing less than 2 ounces. They are 3¾ inches long and 2⅝ inches across and will fit compactly in the pocket, always available ready for instant use. You should buy one for each hand.

No. S9095. Silent Defender. Each. 25c

Or Two for 45c postpaid anywhere.

Elec-Trick Push Button

Did you ever see a youngster pass by a push-button without trying it? Never—it can't be done. That's the psychology back of this Elec-trick Push Button. Place this little contrivance anywhere it will be noticed — in the lapel of your coat or vest if you choose. Upon pressing it the victim naturally expects to hear it ring. The result can be better imagined than described. As soon as he touches it, you will see some of the liveliest dancing you ever witnessed in your life. It gives a smart "shock" as soon as the Button is pressed. Never known to fail. Attach it to your house—WOW! What a shock they get when they press what they think is your door bell.

No. 2062. Elec-Trick Push Button. 15c

3 for 40c., or $1.35 per dozen postpaid.

HOW TO ORDER

WE PAY POSTAGE

When the full amount is sent with your order, we deliver nearly everything in this catalog postpaid by mail. The only exceptions are items of an unmailable nature such as REVOLVERS, FIREARMS, STINK BOMBS, SNEEZING POWDER, ITCHING POWDER, FIREWORKS, EXPLOSIVES and a few special articles that are plainly marked "NOT PREPAID" in the catalog. When an order includes any unmailable merchandise, the entire shipment is sent by express collect, or we will prepay the express charges if you instruct us to do so and add sufficient to cover the cost of the goods and the charges.

HOW TO REMIT

Remittance may be sent in any form most convenient to yourself. Just please yourself. It is immaterial to us how you send money so long as it is in some cashable form. You can remit by Money Order, Personal Check, Bank Draft, Currency, Coin or Postage Stamps. Customers unknown to us remitting by check should have same certified to avoid delay. We suggest the advisability of registering letters containing coin, currency or postage stamps as a precaution against loss.

Postage Stamps Accepted

We will accept good, clean, unused U. S. Postage Stamps in payment of orders, whether large or small.

Complete Mammoth Catalog 10c

A Copy of our Complete Catalog mailed on receipt of 10c., or DeLuxe Edition with cloth binding 25c. Bigger and better than ever. Only book of its kind in existence. This catalog lists all the latest tricks in magic, the newest novelties, puzzles, games, sporting goods, rubber stamps, unusual and interesting books, curiosities in seeds and plants, etc.

No. 999. Complete Catalog.....10c
No. 1000. DeLuxe Edition.....25c

Art Catalog Of Jewelry, Silverware, Furniture, Etc.

We also publish a large catalog of gift goods, diamonds, watches, jewelry, silverware, automobile supplies, high grade furniture, etc. Considered one of the finest catalogs ever put out. The art work and color pages are superb and unsurpassable. Contains a complete line of strictly HIGH GRADE MERCHANDISE. Many jewelers and dealers throughout the country use this special ART CATALOG as a counter salesman to show their customers, as it enables them to submit a more comprehensive selection of quality merchandise than would otherwise be possible. To eliminate the merely curious, we are compelled to ask for a deposit of ONE DOLLAR, which is about one fifth the actual cost of the book. This deposit may be deducted from any subsequent order for merchandise which you may select from the catalog.

No. 142. Shipped Postpaid..... $1.00

Subscribe to our Monthly Magazine

Fun, Magic and Mystery

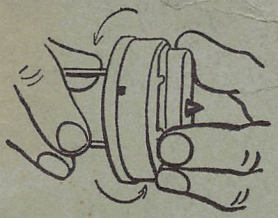
We also publish a monthly magazine of FUN, MAGIC AND MYSTERY. Each issue contains a big collection of parlor magic, tricks with cards, fortune-telling, funny readings, amusing experiments, money-making secrets, jokes, riddles, conundrums, parlor amusements, puzzles, problems, science, mechanics, etc. In addition it will list all the latest novelties, tricks, puzzles, etc. Because it is really a magazine and catalog combined, we have fixed the subscription price at ONLY 25c per year, or a 4 months trial subscription for 10 cents. This new price cancels all previous special offers. Try this magazine for one year.

JOHNSON SMITH & CO.
RACINE, --- WISCONSIN

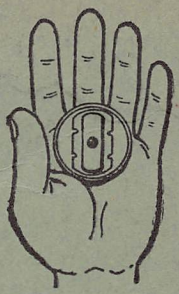
JOY BUZZER

(*Hand Shaker and Tickler*)

FUNNIEST JOKER'S NOVELTY EVER INVENTED!



Use the ring as a key to wind it.



Wear it as a ring —the Buzzer in the palm.

It "shocks" them when they shake hands.

It makes them jump if they are ticklish.

They will hit the ceiling if they sit on it.

Under a sheet it feels like a mouse.

With one of these little contrivances you may have no end of fun. Attached to one end of the Joy Buzzer is a brass ring that slips over the second finger, allowing the Buzzer itself to be concealed unobserved in the palm of the hand. Inside the Buzzer is a clock-work mechanism that is wound up. Projecting from the center of the Buzzer is a brass point, and a little pressure upon this point releases the mechanism. Shake hands with someone and see the shock the person receives when he unconsciously releases the mechanism of the Buzzer. If he is ticklish, watch him jump. Place it on a chair and watch the commotion when someone sits upon it Place it under a pillow—under a sheet it feels like a mouse. You can use it as an ordinary "tic-tac" on a door or window—use it to awaken a sleeper by holding it on the sole of the foot or just behind the ear—try it on the window of an automobile just as the gears are shifted; they will think the engine is "busted." Dozens of other uses will suggest themselves to you. It is well and strongly made, entirely of metal, and it is certain you will get more than your money's worth of fun out of this little contraption.

No. 2955. JOY BUZZER. Price Postpaid..... 28c

THIS ELECTRIC TELEGRAPH SET 15c

DOT 'N' DASH TELEGRAPH SET COMPLETE WITH MORSE CODE

Learn how to become an

EXPERT TELEGRAPH OPERATOR

In a very short time

Use it for SENDING

As well as for RECEIVING

Complete in box with Full Instructions.

ENTERTAINING
EDUCATIONAL
NOVEL
CHEAP

3 BOOKS FOR BOYS
You should have

Boy Electrican with 75 illustrations for making Batteries. Dynamos, Motors. Telegraph Apparatus, Telephone, Lights, Bells, Alarms, Coils, "Wireless" Current Reverser, Electric Engine, Radio, etc. Written so anyone can understand it. **PRICE 10c.**

STAR TOY MAKER Greatest boys' book written. Tells how to make a Pinhole Camera, a Canoe, model Railroad, a Telephone, Boomerang, Telegraph Instrument, Box Kite, Talking Machine, Microscope, Electric Motor, Electric Door Bell, Water Wheel, Paddle Raft, a pair of Skis, a Dog Sled, Bird House, Rabbit Yard, etc. 64 pages. 150 illustrations. **PRICE 10c.** *Postpaid.*

BOYS OWN TOYMAKER. A new book. Tells how to make chemical toys, electrical toys, galvanic toys, mechanical toys, paper toys, cardboard toys, boats, traps, etc. 200 illustrations. **Price 25c.** *Postpaid.*

BOYS! Here you are boys. A private ELECTRIC TELEGRAPH SET of your own for FIFTEEN CENTS. You can have lots of fun sending messages to your friends. Better still, get TWO SETS—one for receiving and the other for sending. Hook them up for two way messages (sending and receiving) as shown in the printed directions. It is no trouble at all to operate with the simple instructions that accompany each set. It operates on any standard dry battery which you can obtain at any hardware, electrical or department store throughout the country. With this outfit you can learn to transmit and receive messages in the MORSE INTERNATIONAL CODE, and in a very short time you may become quite an expert operator. It is mounted on a wooden base measuring 4 x 3 inches, first class construction throughout. It comes complete with key sounder, magnet, miniature Western Union telegraph blanks, and packed in a neat box with full printed instructions—everything but the battery, for ONLY 15 Cents postpaid.

No. 4919 ELECTRIC TELEGRAPH SET. Price Postpaid.....15c

JOHNSON SMITH & CO., RACINE, WIS.